

PB-230 712

POLLUTION OF THE INTERSTATE WATERS
OF PERDIDO BAY AND ITS TRIBUTARIES -
FLORIDA AND ALABAMA. PROCEEDINGS
OF CONFERENCE, SESSION (2nd), HELD AT
PENSACOLA, FLORIDA ON FEBRUARY 25-26,
1971

Environmental Protection Agency
Atlanta, Georgia

26 February 1971

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ALABAMA FLORIDA

PB 230 712

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PROCEEDINGS

Blackwater R

PERDIDO

RIVER

Second Session
Pensacola, Florida
February 25-26, 1971

Eleven
Mile Ct.

Grossy Pt

U.S. Hwy. 98 Bridge

Bayou
Marcus

Millview

Bridge Ct

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Interstate
of Perdido Bay and Its Tributaries -
and Alabama

Tarklin Bayou

PROTECTION AGENCY - WATER QUALITY OFFICE

CONFERENCE

IN THE MATTER OF
POLLUTION OF THE INTERSTATE WATERS
OF PERDIDO BAY AND ITS TRIBUTARIES
(FLORIDA-ALABAMA)

held at

Municipal Auditorium
Pensacola, Florida

February 25-26, 1971

Conference in the matter of pollution of the
interstate waters of Perdido Bay and its tributaries (Florida-
Alabama) held at the Municipal Auditorium, Pensacola, Florida,
on February 25-26, 1971, at 9:30 a.m.

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Opening Statement - Mr. White

P R O C E E D I N G S

OPENING STATEMENT

BY

MR. JOHN C. WHITE

MR. WHITE: The conference is open.

This second session of the conference in the matter of pollution of the interstate waters of the Perdido Bay and its tributaries in Florida and Alabama is being held under the provisions of Section 10 of the Federal Water Pollution Control Act, as amended.

Under the provisions of the Act, the Administrator of the Environmental Protection Agency (this authority was formerly vested in the Secretary of the Interior) is authorized to call a conference of this type when requested to do so by the Governor of a State. On the basis of a written request from the Honorable Albert P. Brewer, former Governor of Alabama, dated December 22, 1969, the Secretary of the Interior called a conference to consider the pollution in the interstate and navigable waters of Perdido Bay. The first conference was held January 22, 1970, in Gulf Breeze, Florida.

As specified in Section 10 of the Act, the Florida Department of Air & Water Pollution Control and the Alabama Water Improvement Commission have been notified of this

Opening Statement - Mr. White

reconvened session.

Both the State and Federal Governments have responsibilities in dealing with water pollution control problems. The Federal Water Pollution Control Act declares that the States have primary rights and responsibilities for taking action to abate and control pollution. Consistent with this, we are charged by law to encourage the States in these activities.

At the same time, the Administrator of the Environmental Protection Agency is charged by law with specific responsibilities in the field of water pollution control in connection with the pollution of interstate and navigable waters. The Federal Water Pollution Control Act provides that pollution of interstate or navigable waters which endangers the health or welfare of any persons shall be subject to abatement. This applies whether the matter causing or contributing to the pollution is discharged directly into such waters or reaches such waters after discharge into a tributary.

The purpose of the conference is to bring together the State water pollution control agencies, representatives of the Environmental Protection Agency, and other interested parties to review the existing situation and the progress which has been made to lay a basis for future action by all parties concerned and to give the State, localities, and industries an opportunity to take any indicated remedial action under the

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Opening Statement - Mr. White

State and local law.

The Florida Department of Air & Water Pollution Control will be represented by Mr. Nathaniel Reed and his designee, Mr. Vince Patton.

The Alabama Water Improvement Commission will be represented by Dr. Ira Myers and his designee, Mr. Arthur Beck.

The Federal conferee is Mr. Paul Traina, who is Director, Regional Planning Office, Southeast Region, Water Quality Office, Environmental Protection Agency.

My name is John C. White. I am from the Atlanta Regional Office of the Water Quality Office of the Environmental Protection Agency and the representative of Mr. Ruckelshaus.

The parties to this conference are the official State water pollution control agencies and the Environmental Protection Agency. Participation in this conference will be open to representatives and invitees of these agencies and such persons as inform me that they wish to present statements. However, only the representatives of the Florida Department of Air & Water Pollution Control, the Alabama Water Improvement Commission, and the Environmental Protection Agency constitute the conferees.

At the first session, the conferees unanimously recommended a program for necessary action. The recommendations of the conferees are as follows:

Opening Statement - Mr. White

A short preamble:

To abate the existing pollution in Perdido River and Perdido Bay, the following water quality management and waste abatement program is recommended:

1. There shall be an overall removal efficiency of 90 percent for carbonaceous material from the St. Regis Paper Company. The St. Regis waste effluent, as measured below the present riffle terraces, shall not exceed 8,880 pounds per day of 5-day BOD and 2,610 pounds per day of total organic carbon. All settleable solids shall be removed.

2. The St. Regis Paper Company shall remove the foam-causing constituents from its effluent.

3. The St. Regis Paper Company shall reduce the color of its waste discharge to meet the water quality standards of Florida, Alabama, and the Federal Government.

4. The St. Regis Paper Company shall make a feasibility study of construction of an essentially closed system involving recirculation, treatment, and reuse of its process water. A progress report shall be submitted to the conferees by January 1, 1971.

5. Sewage treatment plants on Bayou Marcus shall be consolidated into a central facility with removal efficiencies of 90 percent for carbonaceous material plus adequate disinfection of effluent on a year-round basis.

Opening Statement - Mr. White

6. All waste abatement facilities shall be in operation not later than December 31, 1972.

7. No further construction dredging shall be permitted in Perdido Bay until a plan for development of the shoreline has been established. At that time, construction dredging shall be permitted only in accordance with this plan, to be completed within one year by representatives of Baldwin County, Alabama, and Escambia County, Florida, the State of Alabama, the State of Florida, the U. S. Army Corps of Engineers, and the U. S. Department of the Interior. Any necessary maintenance dredging in the interim shall be conducted by diking the dredging area. Maintenance of existing channels shall be by hydraulic pipeline dredging only. Disposal of all dredged material shall be to upland spoil sites.

As noted previously, the conference has been reconvened to consider the progress which has been made to abate the pollution of Perdido Bay and to make any further recommendations that the conferees deem necessary.

Now a word about procedures governing the conduct of the meeting. The conferees will be called upon to make statements. The conferees, in addition, may call upon participants whom they have invited to the conference to make statements. In addition, we shall call on other interested individuals who have indicated they wish to present statements. At the

Opening Statement - Mr. White

conclusion of each statement, the conferees will be given an opportunity to comment or ask questions.

One point that should be made completely clear is that the parties to this conference are seated at the head table. In order to carry on an orderly proceeding, we do not permit questions or comments from the floor. If you have any questions or comments, please save them until you come to the podium and address the conferees.

Everyone will be given a full opportunity to present anything that is relevant for the consideration of the conferees.

At the end of all the statements, we shall have a discussion among the conferees and try to arrive at a basis of an agreement on the facts which have been presented. Then we shall go into a brief executive session. Following this session the conferees will announce ~~their~~ revised conclusions and recommendations which have been dictated by the facts as they appear today.

Under the Federal law, the Administrator of the Environmental Protection Agency is required at the conclusion of the conference to prepare a summary which will be sent to the conferees. The conclusions and recommendations of the conferees do not have any basis in law until they are adopted by the Administrator.

Opening Statement - Mr. White

A record and verbatim transcript of the conference is being made by Mrs. Virginia Rankin. This is being made for the purpose of aiding in preparing the summary and also for providing a complete record. It usually takes four to six months for the transcript to come out in printed form. If you wish a record of the proceedings beforehand, you can check with Mrs. Rankin, who is an independent contractor, and make any arrangements that are desirable with her. I would like to indicate that we do not print in color, so take this into account when you are making your presentation if you have slides or pictures.

We shall make copies of the summary and transcript available to the official State water pollution control agencies. We have generally found that for the purpose of maintaining relationships within the States that the people who wish summaries and transcripts should request them through their State agency rather than come directly to the Federal Government. However, at the option of the States we might mail these directly. The reason for this is that when the conference has been concluded, we would prefer that interested people deal through their respective State agencies.

I would like to suggest that all speakers and participants other than conferees making statements come to the lectern and identify themselves for the record.

I would now like to call on the Federal conferee for

J. A. Little

the Federal presentation.

Mr. Traina.

MR. TRAINA: Thank you, Mr. White.

I in turn would like to call on Mr. John Little, who is Director of our Technical Services Program in Athens, Georgia, for the Federal report.

JOHN A. LITTLE, DIRECTOR
TECHNICAL SERVICES PROGRAM
SOUTHEAST WATER LABORATORY
WATER QUALITY OFFICE, ENVIRONMENTAL
PROTECTION AGENCY, ATHENS, GEORGIA

MR. LITTLE: Mr. Chairman, conferees and ladies and gentlemen.

My name is John A. Little. I am Director of the Technical Services Program in the Southeast Region, Water Quality Office, Environmental Protection Agency.

At this time I would like to present a report to you which describes a technical study conducted by the staff of the Southeast Water Laboratory in cooperation with staff from the Florida Department of Air & Water Pollution Control. The study was conducted at the St. Regis Paper Mill at Cantonment, Florida, in November 1970. Prior to this time, in September 1969, a water quality investigation revealed the damage being caused by waste discharges from the St. Regis Mill.

J. A. Little

The title of the report to be presented now is Supplement to the Effects of Pollution on Water Quality, Perdido River and Bay, Alabama and Florida, dated February 1971.

Mr. Chairman, I would like to have this report introduced into the record in its entirety and I will read pertinent sections at this time.

MR. WHITE: Without objection, it will be entered into the record as if read.

(The report referred to follows:)

**SUPPLEMENT TO
EFFECTS OF POLLUTION ON WATER QUALITY
PERDIDO RIVER AND BAY
ALABAMA AND FLORIDA**

**Environmental Protection Agency
Water Quality Office
Southeast Water Laboratory
Technical Services Program
Athens, Georgia**

February 1971

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INTRODUCTION

BACKGROUND

On April 7, 1969, the Director, Technical Staff, Alabama Water Improvement Commission, requested technical assistance from the Southeast Region of the Federal Water Pollution Control Administration in evaluating water quality conditions and waste sources in Perdido Bay. The bay and its tributaries were studied during September 1969, and an evaluation of the data showing interstate pollution (primarily from the St. Regis paper mill at Cantonment, Florida) was presented in a report entitled Effects of Pollution on Water Quality, Perdido River and Bay, Alabama and Florida. In January 1970, the report was presented at an enforcement conference, called at the request of Governor Albert P. Brewer of Alabama, to consider the matter of pollution of interstate waters of Perdido Bay and its tributaries (Florida-Alabama). With minor changes, the recommendations outlined in the 1970 report were adopted by the Conferees. On the basis of more thorough studies conducted at the mill in November 1970, revisions in the effluent recommendations relating to waste discharges from the St. Regis Mill are now suggested.

PURPOSE AND OBJECTIVES

Following the 1970 enforcement conference, it was determined that another survey of waste discharges at the St. Regis Mill was needed to supplement data obtained in the 1969 field study. The reasons for the survey were: (a) to confirm previous results or produce more representative

values of average mill discharges, and (b) to evaluate the strength of certain process wastes generated within the mill.

ACKNOWLEDGEMENTS

The cooperation and contribution of the Florida Department of Air & Water Pollution Control and the St. Regis Paper Company are gratefully appreciated. For their assistance, we extend special thanks to:

- The Florida Department of Air & Water Pollution Control's Regional Office for providing laboratory space and for the suspended solids analyses.
- The St. Regis Technical Department for assisting in sampling point selection and sample collection.

SUMMARY

During November 1970, personnel from the Southeast Region, Federal Water Quality Administration (FWOA) conducted a 72-hour survey of waste discharges at the St. Regis Integrated Pulp and Paper Mill at Cantonment, Florida. The mill produces 950 tons per day of pulp, of which approximately 280 tons per day are bleached.

At the time of the survey, two settling basins normally used in the waste treatment process were not in use. Settled solids were in the process of being removed from the basins and wastes were routed through a temporary settling basin. Treatment facilities at the time of the survey, then, included a settling basin with approximately 18 hours detention time followed by two lakes with a combined estimated detention time of approximately 60 hours. Riffle terraces are located before and after the final lake, and foam barriers are placed across the channel below the riffle terraces. The temporary changes in the treatment process had no effect on the raw waste load. Approximately 29 million gallons per day (mgd) of liquid wastes are discharged into Elevenmile Creek. Survey results showed that:

1. Wastes containing approximately 73,600 pounds per day of 5-day biochemical oxygen demand (BOD₅) are generated within the mill. The temporary treatment system removed 42% of the average 5-day biochemical oxygen demand load, leaving 58% or 42,500 pounds per day in the discharge to Elevenmile Creek. The discharged effluent is equivalent to a population of 250,000.

2. The total organic carbon (TOC) load before treatment is calculated to be 68,600 pounds per day. Treatment in effect at the time removed 29% of the TOC load, leaving 48,800 pounds of total organic carbon in the discharge to the receiving stream.
3. Approximately 59,400 pounds per day of suspended solids enter the St. Regis treatment facilities. Treatment removed 71% of the suspended solids, leaving 17,100 pounds per day in the final effluent.
4. Foam collected from the Alabama shore of Perdido Bay contained the same chemical constituents found in foam collected from the St. Regis treated effluent at Florida Highway S-186.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

1. Data collected during the 72-hour waste survey agree with long term average values recorded by the St. Regis Paper Company.
2. The St. Regis Paper Company's Mill located north of Pensacola, at Cantonment, Florida is generating an excessive amount of raw pulp and paper mill wastes. Approximately 29 mgd of inadequately treated wastes are discharged into Perdido Bay via Elevenmile Creek.

Information compiled from a waste survey of mills in the Southern Pulp and Paper Industry indicated that for the amount of bleached and unbleached pulp and paper produced at the St. Regis Mill, the average amount of wastewater volume and BOD₅ loading should be approximately 23.0 mgd and 50,900 pounds per day respectively. The wastewater volume and BOD₅ loads actually generated exceed the average southern Kraft operations values by 20% and 31% respectively. In-plant process improvement is clearly indicated.

3. The St. Regis paper mill waste effluent is the major cause of the foam problem in Perdido Bay.

RECOMMENDATIONS

The recommendations of the Conferees at the Federal-State enforcement conference on pollution of Perdido River and Bay, held in January 1970 were as follows:

To abate the existing pollution in Perdido River and Bay, the following water quality management and waste abatement program is recommended as a minimum:

1. There shall be an overall removal efficiency of 90% for carbonaceous waste material from the St. Regis Paper Company. The St. Regis waste effluent, as measured below the present riffle terraces, shall not exceed 8,800 pounds per day of five-day BOD, and 2,610 pounds per day of total organic carbon. All settleable solids shall be removed.
2. The St. Regis Paper Company shall remove the foam causing constituents from its effluent.
3. The St. Regis Paper Company shall reduce the color of its waste discharge to meet the water quality standards of Florida, Alabama and the Federal Government.
4. St. Regis Paper Company shall make a feasibility study of construction of an essentially closed system involving recirculation, treatment and reuse of its process water. A progress report shall be submitted to the Conferees by January 1, 1971.

5. Sewage treatment plants on Bayou Marcus shall be consolidated into a central facility with removal efficiencies of 90% for carbonaceous material plus adequate disinfection of effluent on a year round basis.
6. All waste abatement facilities shall be in operation not later than December 31, 1972.

On the basis of information now available, it is recommended that the Conferees consider the following changes in Item 1 of their original recommendations:

- 1a. There shall be an overall removal efficiency of 90% for carbonaceous waste material from the St. Regis Paper Company. All settleable solids shall be removed.
- b. In view of the excessive amount of raw waste load generated at the plant, the St. Regis Paper Company shall make a feasibility study and submit plans for in-plant process changes or other measures to meet an industry-wide average effluent discharge value, which in this case would result in an allowable waste load discharge of 5,100 pounds per day of BOD₅ following 90% treatment. The allowable effluent TOC load shall correspond to 90% TOC removal following in-plant load reduction and in no case shall be greater than 6,860 pounds per day.

DESCRIPTION OF STUDY AND STUDY AREA

STUDY AREA

The St. Regis Paper Company operates an integrated pulp and paper mill in Cantonment, Escambia County, Florida. The mill is located approximately 12 miles north of Pensacola and has been in operation since 1941. The original mill has been expanded to essentially two mills at one site which presently produce approximately 950 tons per 24-hours of bleached and unbleached pulp by the sulfate (Kraft) process. Approximately 280 tons per day of pulp are bleached. Pulp is converted into approximately 885 tons per day of bleached and unbleached products. The 29 mgd of liquid wastes generated at the plant are discharged into Perdido Bay via Elevenmile Creek.

Treatment facilities at the mill normally consist of two settling basins followed by two small lakes. However, at the time of the survey, treatment facilities included only a temporary settling basin with an estimated 18 hours detention time, followed by the two lakes with an additional combined detention time of approximately 60 hours (Figure 1). The two out-of-service settling basins normally provide a detention time of 32 hours. Riffle terraces are located before and after the final lake, and foam barriers are placed across the channel below the riffle terraces.

STUDY PROGRAM

To supplement grab sample data obtained from the September 1969 survey, a 72-hour survey of sources of wastes and waste treatment efficiency at the mill was conducted during the period November 10-13, 1970. A total of

10 sites were selected for sample collection. The 10 sampling points included most major waste sources (see Table 1).

Since the original mill and expansions have resulted in a sewer system which serves essentially two mills at one site, in-plant waste sources are numerous, and it is difficult to represent each source with a limited number of sampling stations. Combined raw waste effluent from all processes is easily measurable at one point, however. Figure 2 is a waste flow diagram of the mill which shows the numerous waste sources and sampling stations routinely sampled by mill management. With the assistance of the mill's engineering technical division, eight in-plant sampling points were selected to measure the major waste sources. Two other points were selected (R-1 & R-2) to represent combined plant waste before and after treatment. Figure 3 shows waste sources and related stations selected for sample collection.

Analyses made at the plant included BOD₅, TOC and suspended solids. Since the Conferees' recommendations called for the removal of all settleable solids, suspended solids concentrations were determined to indicate the present degree of solids removal.

Acid characterization of foam found in Perdido Bay was compared with that found in the mill effluent.

WASTE TREATMENT FACILITIES
ST. REGIS PAPER COMPANY - CANTONMENT, FLORIDA
NOVEMBER 10 - 13, 1970

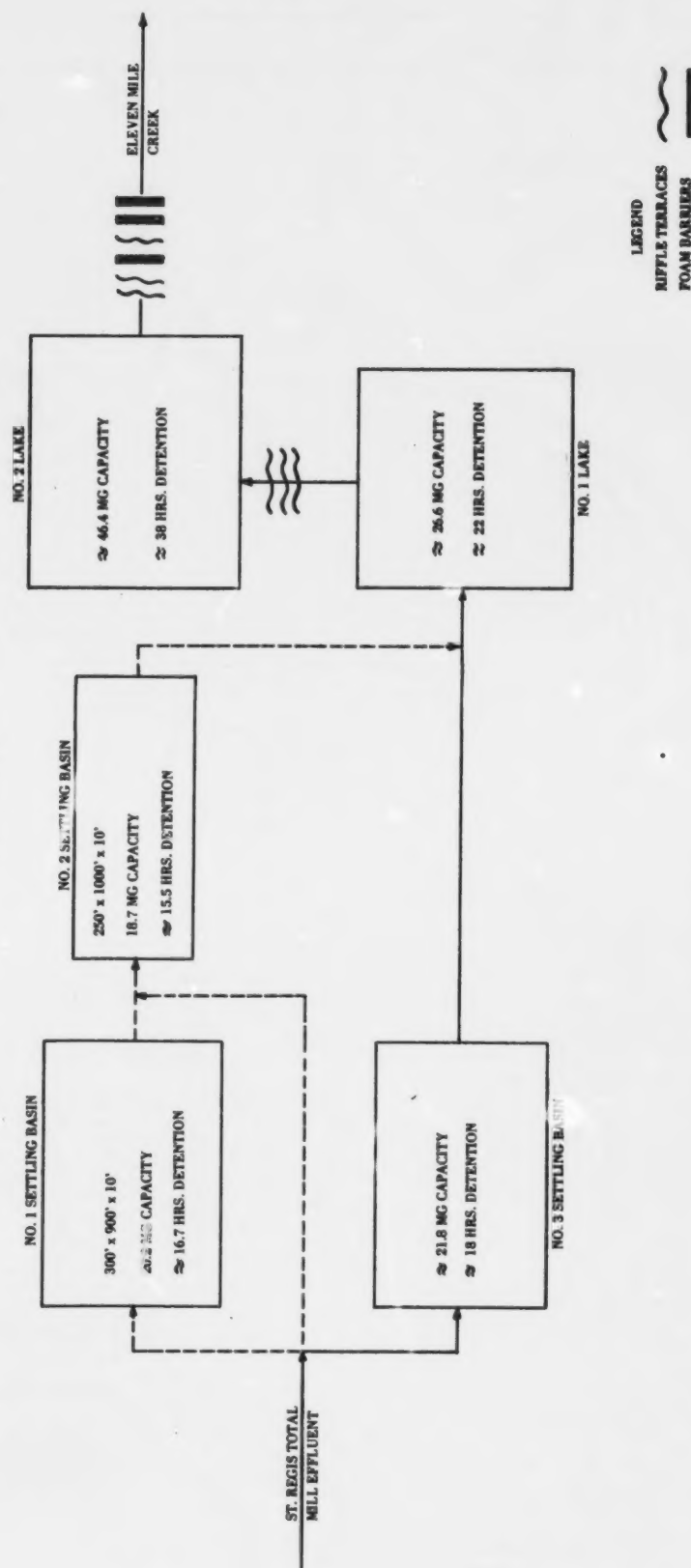


Fig. 2

WASTE FLOW DIAGRAM
ST. REGIS PAPER CO. - CANTONMENT, FLA.

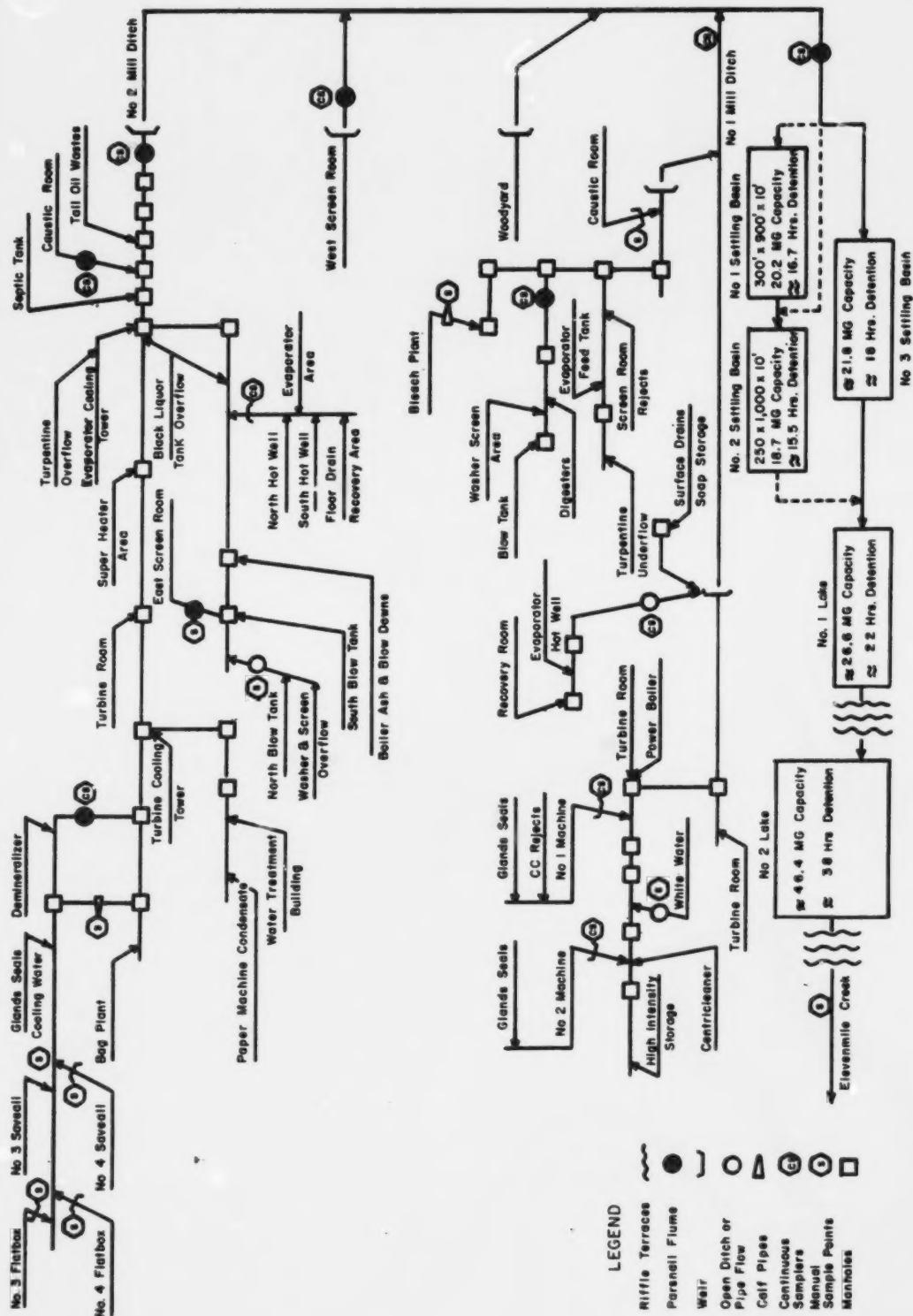


Fig. 3

WASTE FLOW SAMPLING DIAGRAM
ST. REGIS PAPER COMPANY, CANTONMENT, FLA.
NOVEMBER 10 - 13, 1970

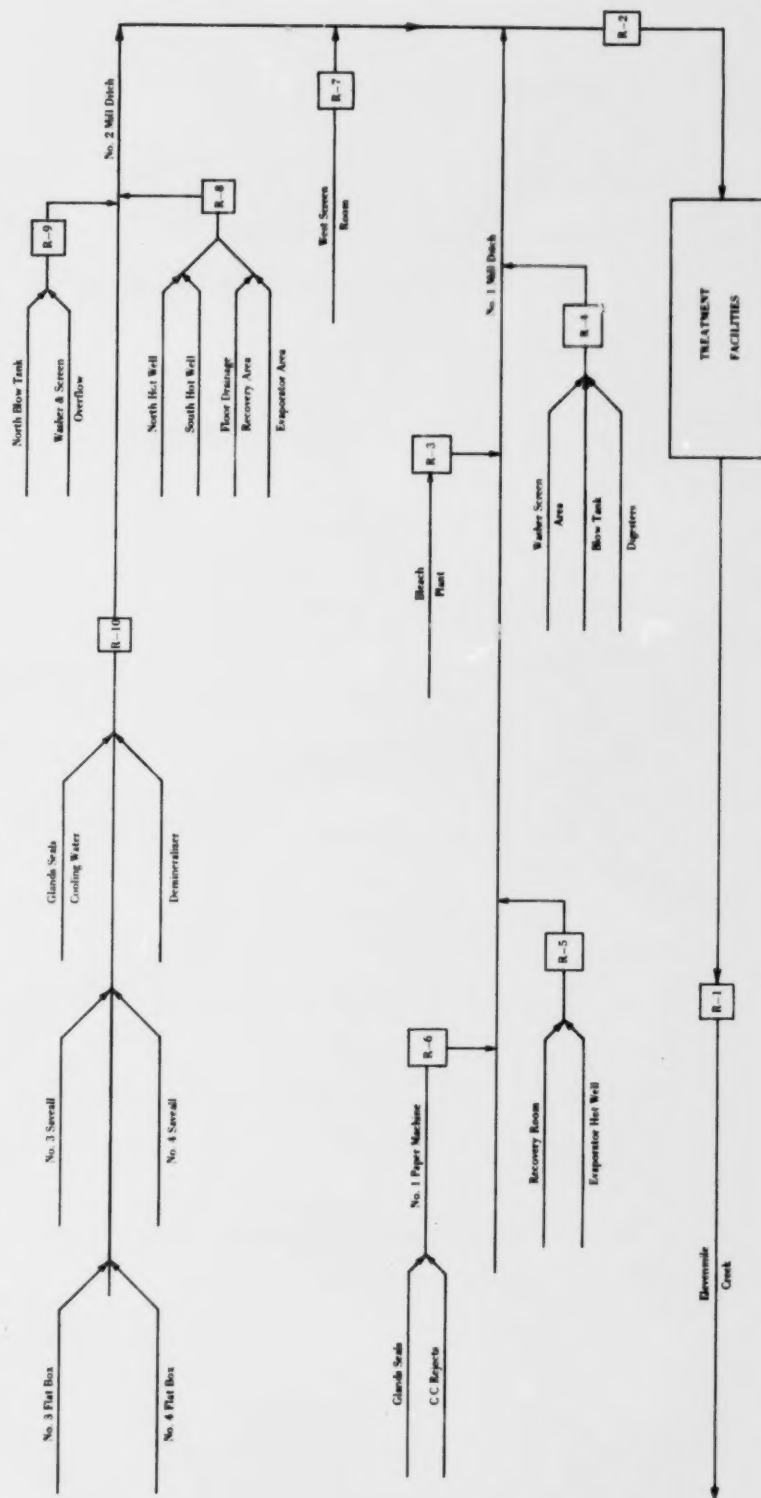


TABLE 1
SAMPLING STATION DESCRIPTIONS

<u>Station Number</u>	<u>Location</u>
R-1	Treated effluent. Elevenmile Creek at Florida Highway S-186 located in NE 1/4 sec. 3, T. 1S, R. 31W, Escambia County, Florida.
R-2	Combined plant raw waste effluent.
R-3	Bleach plant effluent.
R-4	No. 1 mill washer screen area, blow tank and digester effluent.
R-5	No. 1 mill evaporator and recovery room effluent.
R-6	No. 1 paper machine effluent.
R-7	West screen room effluent.
R-8	No. 2 mill evaporator and recovery area effluent.
R-9	No. 2 mill north blow tank and washer and screen overflow effluent.
R-10	No. 2 mill effluent at paper machine Nos. 3 and 4.

STUDY FINDINGS

The chemical data at all in-plant sampling stations compare favorably with values normally observed by St. Regis personnel. Table 2 shows a summary of weighted average concentrations and calculated loads for each of the three parameters measured (BOD₅, TOC & Suspended Solids). The combined plant effluent data (before and after treatment) are representative of long term averages recorded by the mill.

Table 3 shows in-plant station waste loadings and combined plant loadings before and after treatment. Although each in-plant source was not measured, sampling did give an accurate account of treatment efficiencies and total waste loads generated within the mill and discharged into Elevenmile Creek.

Data obtained from the survey were compared with wastewater volumes and waste loads that may be expected from average southern Kraft operations. The Water Resources Research Institute at the University of North Carolina recently issued a publication which included results of a comprehensive survey of the amount of waste and wastewater generated per ton of production for different types of mills in the southern pulp and paper industry.^{1/} This publication shows that the average volume of wastewater per ton of product is 18,500 gallons for unbleached product and 38,000 gallons for bleached product. The St. Regis Mill produces approximately 670 tons per day of unbleached pulp and 280 tons per day of bleached pulp. Reported wastewater flow during the survey was about 29 mgd. This exceeds the average amount for southern Kraft operations by approximately 6 mgd.

^{1/}Survey of Water Utilization and Waste Control Practices in the Southern Pulp and Paper Industry, Water Resources Research Institute, University of North Carolina, June 1970.

TABLE 2

CHEMICAL DATA SUMMARY

ST. REGIS PAPER COMPANY - CANTONMENT, FLORIDA

STUDY - NOVEMBER 10-13, 1970

Station No.	Flow	Five-Day Biochemical Oxygen Demand		Suspended Solids		Total Organic Carbon	
		(mg/l)*	(lbs/DAY)	(mg/l)*	(lbs/DAY)	(mg/l)*	(lbs/DAY)
R-1	28.94	176	42,500	71	17,100	202	48,800
R-2	28.94	305	73,600	246	59,400	284	68,600
R-3	5.32	124	5,500	125	5,600	203	9,000
R-4	0.33	545	1,500	99	272	415	1,100
R-5	2.87	247	5,900	16	383	173	4,100
R-6	2.13	104	1,800	168	3,000	106	1,900
R-7	0.30	548	1,400	190	475	374	936
R-8	1.19	705	6,700	157	1,600	598	5,900
R-9	0.42	797	2,800	238	834	790	2,800
R-10	4.71	80	3,100	80	3,100	67	2,600

NOTE: * Flow weighted averages.

TABLE 3

DISTRIBUTION OF WASTE LOADS SAMPLED
ST. REGIS PAPER COMPANY - CANTONMENT, FLORIDA

Station No.	Flow		BOD ₅ Load		TOC Load		Suspended Solids Load	
	(mgd)	% Total	#/day	% Total	#/Day	% Total	#/Day	% Total
R-1	28.94	100	42,500	58	48,800	71.1	17,100	28.9
R-2	28.94	100	73,600	100	68,600	100.0	59,400	100.0
R-3	5.32	18.4	5,500	7.5	9,000	13.1	5,600	9.3
R-4	0.33	1.1	1,500	2.0	1,100	1.7	272	0.5
R-5	2.87	9.9	5,900	8.0	4,100	6.0	384	0.6
R-6	3.13	10.8	1,900	2.5	1,900	2.7	3,000	5.0
R-7	0.30	1.0	1,400	1.9	936	1.4	475	0.8
R-8	1.19	4.1	6,700	9.1	5,900	8.7	1,600	2.6
R-9	0.42	1.4	2,800	3.8	2,800	4.0	834	1.4
R-10	4.71	16.3	3,100	4.3	2,600	3.8	3,100	5.3
In-Plant Coverage	18.27	63.1	28,800	39.1	28,400	41.4	15,200	25.5

BIOCHEMICAL OXYGEN DEMAND

Although in-plant sampling accounted for only 39% of the BOD₅ load entering the treatment basins, approximately 63% of the total flow was accounted for. A total account of waste load from each plant process was not intended in the time available. The BOD₅ concentrations during the November 10-13 study period are shown in Table 4.

The average BOD results at sampling stations R-1 and R-2 (before and after treatment sampling stations) showed very little variation among individual samples and are in close agreement with eight-month averages reported by mill management.

The average raw waste load generated within the plant is calculated to be 73,600 pounds per day of BOD₅. Treatment in effect reduced this load to 42,500 pounds per day, a removal of 42%. The untreated waste load of 73,600 pounds per day is 15,200 pounds per day less than the 5-day BOD measured during the more limited September 1969 survey. Treatment efficiency, however, did not vary a great deal from the 38% reported in the earlier survey.

The Water Resources Research Institute publication reports average BOD₅ loads for unbleached and bleached pulp and paper mills to be 43 and 79 pounds per ton of production respectively. Using the average values, a raw load of 50,900 pounds per day of BOD₅ was calculated. The present raw load generated exceeds the calculated load by 22,700 pounds. This excessive raw waste load at St. Regis indicates that in-plant process improvements should be effected.

TABLE 4

FIVE-DAY BIOCHEMICAL OXYGEN DEMAND DATA (mg/l)

ST. REGIS PAPER COMPANY - CANTONMENT, FLORIDA

NOVEMBER 10-13, 1970

Date (1970)	Work Shift Hours	S T A T I O N N U M B E R S									
		R-1	R-2	R-3	R-4	R-5	R-6	R-7	R-8	R-9	R-10
Nov.											
10	7-3	141	272	115	590	375	-	700	1040	1040	-
10	3-11	166	260	126	360	345	-	625	640	605	-
11	11-7	169	272	75	365	222	81	520	610	860	89
11	7-3	172	268	122	360	145	-	295	415	745	-
11	3-11	184	415	115	690	288	-	470	680	750	-
12	11-7	158	365	104	640	242	126	725	710	650	70
12	7-3	220	258	93	510	240	-	540	760	1380	-
12	3-11	210	348	230	280	196	-	520	1000	590	-
13	11-7	170	292	127	375	174	-	405	485	580	-
MEAN		177	306	123	463	247	104	533	704	800	80
WT. AVERAGE*		176	305	124	545	247	104	548	705	797	80

NOTE: * Flow Weighted Average

TOTAL ORGANIC CARBON

The total organic carbon (TOC) test is a useful means of measuring the loading and treatment efficiency of organic waste producing plants such as pulp and paper mills. The TOC test together with the BOD test provides an excellent measure of industrial waste pollution. However, only limited TOC data for paper mill operations are presently available, and average values that may be expected from pulp and paper mill processes have not been developed.

Since a specific TOC recommendation was made by the Conferees, additional TOC data before and after treatment were deemed necessary to provide the representative raw loading values needed before a 90% reduction value can be recommended.

The TOC loadings at all sampling stations closely paralleled BOD₅ results. Average TOC loadings at critical stations R-1 and R-2 are shown in Table 2. The summarized TOC data presented in Table 2 were calculated from the weighted average concentrations shown in Table 5. The summarized data show that 68,600 pounds per day of TOC are generated in the mill, with an effluent load after treatment of 48,800 pounds per day.

The Conferees recommended that the TOC discharge to Elevenmile Creek be restricted to 2,610 pounds per day. The more comprehensive 1970 survey, however, showed that 6,860 pounds per day of TOC in the final effluent is more representative of the present waste load following 90% TOC reduction. In the preceding BOD section, in-plant changes to reduce the untreated BOD₅ load to a more acceptable level is discussed. In-plant improvements will also reduce the untreated TOC load. No industry-wide averages are available at this time to indicate what this acceptable TOC effluent level should be, but it would be less than 6,860 per day.

TABLE 5

TOTAL ORGANIC CARBON DATA (mg/l)
ST. REGIS PAPER COMPANY - CANTONMENT, FLORIDA
NOVEMBER 10-13, 1970

Date (1970)	Work	STATION NUMBERS									
	Shift Hrs	R-1	R-2	R-3	R-4	R-5	R-6	R-7	R-8	R-9	R-10
Nov.											
10	7-3	170	310	180	450	215	35	320	990	1250	80
10	3-11	200	230	180	160	330	40	440	425	475	50
11	11-7	200	240	125	300	125	50	395	615	525	75
11	7-3	205	225	140	305	130	260	350	245	650	80
11	3-11	170	350	205	540	165	45	320	540	670	80
12	11-7	195	365	265	500	146	285	450	650	740	80
12	7-3	215	260	260	395	150	70	395	670	1550	65
12	3-11	235	375	355	145	130	40	350	800	535	45
13	11-7	225	205	145	350	165	30	245	445	740	45
MEAN		202	284	206	349	173	95	364	598	793	67
WT. AVERAGE*		202	284	203	415	173	106	374	598	790	67

*Flow weighted average.

TOTAL SUSPENDED SOLIDS

The Conferees recommended that all settleable solids be removed from the discharged effluent. Since samples collected during the initial survey were not analyzed for solids, it was desirable to gather information on the capability of the treatment facilities to remove settleable materials. Arrangements were made with the Florida Department of Air and Water Pollution Control to make total suspended solids determinations.^{2/} Results of these determinations are summarized in Table 6.

Survey data show that approximately 59,400 pounds per day of total suspended solids enter the St. Regis treatment facilities. Treatment removed 71% of the total suspended solids, leaving 17,100 pounds per day in the final effluent. Although the suspended solids removal of 71% is higher than expected for the lagoon system, removal would approach 90% in a mechanically cleaned clarifier. Accumulated solids present a removal problem in settling lagoons and will interfere with the effectiveness of such lagoons as secondary treatment devices. A mechanically cleaned primary basin preceding biological treatment is normally preferred.

FOAM

Resin acids, together with fatty acids, form the principal constituents of the tall oil produced as a by-product of the sulfate pulping process. Pimaric, isopimaric and dehydroabietic acid are the types of resin acids found in paper mill wastes. Myristic, palmitic, oleic and linoleic

^{2/}This type analysis is not equivalent to settleable solids determination but provides insight into solids removal.

TABLE 6

SUSPENDED SOLIDS DATA (mg/l)

ST. REGIS PAPER COMPANY - CANTONMENT, FLORIDA

NOVEMBER 10-13, 1970

Date (1970)	S T A T I O N N U M B E R S									
	R-1	R-2	R-3	R-4	R-5	R-6	R-7	R-8	R-9	R-10
Nov.										
10-11	50	272	54	134	23	38	109	261	54	24
11-12	78	298	44	108	14	320	384	54	414	126
12-13	84	170	272	70	10	122	140	156	244	90
MEAN	71	247	123	104	16	160	211	157	237	80
WT.AVG.*	71	246	125	99	16	168	190	157	238	80

*Flow weighted averages.

acid are typical of the types of fatty acids normally observed in wastes from the tall oil process. Foam samples collected from mill effluent and Perdido Bay during the initial survey were determined to be of paper mill origin. To supplement the data obtained from limited sampling during the earlier survey, foam samples were again collected from mill effluent and Perdido Bay and analyzed for their resin and fatty acids content. Table 7 lists results of the acid analyses.

Foam samples were collected from two locations within the mill and from the treated effluent during the survey. Only light isolated traces of foam were observed in Elevenmile Creek downstream from Florida Highway S-186 and on Perdido Bay during the three-day study. On December 8, 1970, residents along the bay complained of excessive foaming, and samples of the foam were collected at Lillian Bridge and Manuel Point at that time. Chemical constituents of foam collected from the Alabama shore of Perdido Bay contained chemical constituents identical to foam collected from the St. Regis treated effluent at Florida Highway S-186. The similarity of the acids content in the foam samples indicate that the St. Regis effluent is the major cause of the foam problems observed in Perdido Bay.

TABLE 7
FOAM ANALYSIS
ST. REGIS EFFLUENT AND PERDIDO BAY

Station No. and Location	Date (1970)	FATTY ACIDS			
		Myristic (mg/l)	Palmitic (mg/l)	Oleic (mg/l)	Linoleic (mg/l)
R-1, Elevenmile Creek at Fla. Hwy. S-186	11/10	*	0.16	0.57	0.38
R-1, " "	11/12	*	0.96	4.7	4.0
No. 2 Mill Recovery Area Effluent	11/10	3.0	9.6	123	47
" " " "	11/12	*	41	280	150
No. 1 Total Mill Ditch	11/12	*	17	*	*
Perdido Bay at Lillian Bridge	12/8	0.069	0.11	ND	ND
Perdido Bay $\frac{1}{2}$ mi. Below Manuel Point	12/8	ND	0.10	ND	ND

Station No. and Location	Date (1970)	RESIN ACIDS		
		Pimaric (mg/l)	Isopimaric (mg/l)	Dehydroabietic (mg/l)
R-1, Elevenmile Creek at Fla. Hwy. S-186	11/10	23	22	49
R-1, " " " " " "	11/12	17	15	24
No. 2 Mill Recovery Area Effluent	11/10	*	*	*
" " " " " " " "	11/12	*	*	*
No. 1 Total Mill Ditch	11/12	*	1 to 2	4.3
Perdido Bay at Lillian Bridge	12/8	0.19	0.11	0.19
Perdido Bay $\frac{1}{2}$ mi. Below Manuel Point	12/8	0.15	0.10	0.21

* - Unidentified
ND - None detected

APPENDIX APROJECT PERSONNEL

FEDERAL WATER QUALITY ADMINISTRATION

Billy H. Adams	Sanitary Engineer
Hugh C. Vick	Engineering Technician
R. P. Lawless	Chemist
Thomas B. Bennett, Jr.	Chemist

FLORIDA DIVISION OF AIR AND WATER POLLUTION CONTROL

Willard Hanks	Sanitary Engineer
John Shailer	Engineering Technician

Personnel from the St. Regis Engineering Technical Division also materially contributed to the completion of this survey.

APPENDIX B

SAMPLING PROCEDURE AND ANALYTICAL METHODS

SAMPLING PROCEDURE

Sample collection at the St. Regis Mill began during the day shift on November 10 and continued for seventy-two hours. For all practical purposes, the mill's sewer system is divided into two sewer systems -- one serving the original mill and the other serving later additions. Approximately 22 sampling locations are routinely sampled by mill personnel. Because of the work load and available BOD incubator space, however, sampling was limited to 10 of the established locations.

Sample collection within the mill was coordinated with work-shift sampling conducted by mill personnel. Except for grab samples collected at eight-hour intervals at sampling stations R-1, R-3 and R-9, all samples were collected at eight-hour intervals from continuous samplers.

The 5-day biochemical oxygen demand was the only analysis made by FWQA field personnel. Except for the BOD₅ analyses on 24-hour composite samples from sampling stations R-6 and R-10, all BOD₅ determinations were made on eight-hour composite samples.

All samples collected for total organic carbon analyses were either composite or grab samples collected at eight-hour intervals. Samples were transported to the Southeast Water Laboratory for TOC analyses.

Total suspended solids determinations were made by personnel assigned to the Florida Department of Air and Water Pollution Control Laboratory at Pensacola. All samples collected for suspended solids analyses were combined for a 24-hour composite sample.

Special foam samples for acids analyses were collected from sampling locations within the mill, and from Perdido Bay.

ANALYTICAL METHODS

1. Biochemical Oxygen Demand (Standard Methods for the Examination of Water and Wastewater, 12th Edition, 1965, pp. 415-421.)

2. Total Organic Carbon (FWPCA Methods for Chemical Analysis of Water and Wastes, November 1969).

A microsample of water is injected into a catalytic combustion tube heated to 950°C. The carbonaceous material is oxidized to carbon dioxide. An oxygen stream carries the CO₂ to an infrared analyzer sensitized to provide a measure of CO₂. The amount of CO₂ present is directly proportional to the concentration of carbonaceous material in the injected sample. The instrument used for this analysis is the Beckman Carbonaceous Analyzer, Model No. 915, dual channel.

3. Total Suspended Matter (Nonfilterable Residue) (Standard Methods for the Examination of Water and Wastewater, 12th Edition (1965), pp. 424-425).

4. Resin Acids

The samples were acidified and extracted with chloroform. The sample extracts were dried and esterified using the diazomethane procedure of Schlenk and Gellerman.^{1/} The esterified extracts were adjusted to a certain volume and analyzed using a gas chromatograph equipped with dual flame ionization detectors. The identity of the resin acids was substantiated using mass spectrometry.

^{1/}Schlenk, H. and J. L. Gellerman, 1960. "Esterification of Fatty Acids with Diazomethane on a Small Scale." Anal. Chem., 32: 1412.

J. A. Little

MR. LITTLE: In the background of the report:

On April 7, 1969, the Director, Technical Staff, Alabama Water Improvement Commission, requested technical assistance from the Southeast Region of the then Federal Water Pollution Control Administration in evaluating water quality conditions and waste sources in Perdido Bay. The bay and its tributaries were studied during September 1969 and an evaluation of data showing interstate pollution (primarily from the St. Regis Paper Mill at Cantonment, Florida) was presented in a report entitled Effects of Pollution on Water Quality, Perdido River and Bay, Alabama and Florida. In January 1970 the report was presented at an enforcement conference, called at the request of Governor Albert P. Brewer of Alabama, to consider the matter of pollution of interstate waters of Perdido Bay and its tributaries (Florida-Alabama). With minor changes, the recommendations outlined in the 1970 report were adopted by the conferees. On the basis of more thorough studies conducted at the mill in November 1970, revisions in the effluent recommendations relating to waste discharges from the St. Regis Mill are now suggested.

The purpose and objectives of this study:

Following the 1970 enforcement conference, it was determined that another survey of waste discharges at the St. Regis Mill was needed to supplement data obtained in the 1969

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field study. The reasons for the survey were: (a) to confirm previous results or produce more representative values of average mill discharges, and (b) to evaluate the strength of certain process wastes generated within the mill.

The cooperation and contribution of the Florida Department of Air & Water Pollution Control and the St. Regis Paper Company are gratefully appreciated.

Summary of the results:

During 1970 personnel from the Southeast Region, FWQA, conducted a 72-hour survey of waste discharges at the St. Regis integrated pulp and paper mill at Contonment, Florida. The mill produces 950 tons per day of pulp, of which approximately 289 tons per day are bleached.

At the time of the survey, two settling basins normally used in the waste treatment process were not in use. Settled solids were in the process of being removed from the basins and wastes were routed through a temporary settling basin. Treatment facilities at the time of the survey, then, included a settling basin with approximately 18 hours' detention time followed by two lakes with a combined estimated detention time of approximately 60 hours. Riffle terraces are located before and after the final lake and foam barriers are placed across the channel below the riffle terraces. The temporary changes in the treatment process have no effect on the raw

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waste load. Approximately 29 million gallons per day of liquid wastes are discharged into Eleven Mile Creek. Survey results showed that:

1) Wastes containing approximately 73,600 pounds per day of 5-day biochemical oxygen demand are generated within the mill. The temporary treatment system removed 42 percent of the average 5-day BOD load, leaving 58 percent or 42,500 pounds per day in the discharge to Eleven Mile Creek. The discharged effluent is equivalent to a population of 250,000.

2) The total organic carbon, that is TOC, load before treatment is calculated to be 68,600 pounds per day. Treatment in effect at the time removed 29 percent of the TOC load, leaving 48,800 pounds of total organic carbon in the discharge to the receiving stream.

3) Approximately 59,400 pounds per day of suspended solids enter the St. Regis treatment facilities. Treatment removed 71 percent of the suspended solids, leaving 17,100 pounds per day in the final effluent.

4) Foam collected from the Alabama shore of Perdido Bay contained the same chemical constituents found in foam collected from the St. Regis treated effluent at Florida Highway S-186.

The conclusions and recommendations. Conclusions:

1) Data collected during the 72-hour waste survey

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areee with long-term average values recorded by the St. Regis Paper Company.

2) The St. Regis Paper Company's mill located north of Pensacola, at Cantonment, Florida, is generating an excessive amount of raw pulp and paper mill wastes. Approximately 29 MGD of inadequately treated wastes are discharged into Perdido Bay via Eleven Mile Creek.

Information compiled from a waste survey of mills in the southern pulp and paper industry indicated that for the amount of bleached and unbleached pulp and paper produced at the St. Regis Mill, the average amount of wastewater volume and 5-day BOD loading should be approximately 23.0 MGD and 50,900 pounds per day respectively. The wastewater volume and 5-day BOD loads actually generated exceed the average southern Kraft operations values by 20 percent and 31 percent respectively. In-plant process improvement is clearly indicated.

3) The St. Regis Paper Mill waste effluent is the major cause of the foam problem in Perdido Bay.

Recommendations.

The 1970 recommendations have been read. I would like to repeat Recommendation No. 1:

There shall be an overall removal efficiency of 90 percent for carbonaceous waste material from the St. Regis Paper Company. The St. Regis waste effluent, as measured below the

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present riffle terraces, shall not exceed 8,800 pounds per day of 5-day BOD and 2,610 pounds per day of total organic carbon. All settleable solids shall be removed.

On the basis of information now available, it is recommended that the conferees consider the following changes in Recommendation No. 1 in their original recommendations:

1a) There shall be an overall removal efficiency of 90 percent for the carbonaceous waste material from the St. Regis Paper Company. All settleable solids shall be removed.

1b) In view of the excessive amount of raw waste load generated at the plant, the St. Regis Paper Company shall make a feasibility study and submit plans for in-plant process changes or other measures to meet an industrywide average effluent discharge value, which in this case would result in an allowable waste load discharge of 5,100 pounds per day of 5-day BOD following 90 percent treatment. The allowable effluent TOC load shall correspond to 90 percent TOC removal following in-plant load reduction and in no case shall be greater than 6,860 pounds per day.

I might add at this time that most of the samples collected were collected at 8-hour intervals around the clock from the continuous samplers at the plant over the 72-hour period of the survey.

Mr. Chairman.

J. A. Little

MR. WHITE: Thank you, Mr. Little.

Are there any comments or questions by the conferees?

MR. TRAINA: Mr. Little, I would like to ask you one.

You did indicate that the 72-hour sampling that was done by the Federal people did agree with the long-term results of the company?

MR. LITTLE: Very closely, Mr. Traina.

MR. TRAINA: So that the values that you have reported are representative of their waste loadings?

MR. LITTLE: That is correct.

MR. TRAINA: Of course you have come to us now with a recommendation for BOD which was less than what we had before. You have explained the reasons why. I would like, if you would, just to repeat those so that the conferees could get some feel as to what you found at the mill during your survey.

MR. LITTLE: Repeat these numbers again?

MR. TRAINA: If you would just give us the reasons why we are going from 8,800 down to 5,100.

MR. LITTLE: I see. In the previous survey in 1969 the sampling at the mill was conducted with the use of grab samples, and we thought that the use of composite samples collected throughout a 24-hour operation over a 3-day period would be much more representative of the values produced at the mill. We did this and the results, as you have just said, are very

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close to what the mill has been reporting for the same type of analyses. We feel that this does reflect the proper loadings at the mill at this time.

MR. TRAINA: Thank you.

MR. REED: Mr. White.

MR. WHITE: Yes, Mr. Reed.

MR. REED: Mr. Little, let me see if I read this in layman's language.

As I read this l.b., I am looking at a plant that has leaks, I am looking at a plant that is not all properly run. In layman's language, am I looking at a sloppily run mill?

MR. LITTLE: I would say that is a good assumption, Mr. Reed.

MR. REED: Thank you. (Laughter.)

MR. WHITE: Any other comments?

Dr. Myers.

DR. MYERS: Mr. Chairman, I notice that the alternate recommendation this morning now is changing from 2,610 pounds per day of TOC to, what, 6,860?

MR. LITTLE: That is correct.

DR. MYERS: That is an increase of about three times?

MR. LITTLE: That is right, Dr. Myers. I believe for the same reason that these samples that we collected were much more representative of what the mill does produce and that is

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the reason for these differences in figures.

MR. REED: Mr. White.

MR. WHITE: Yes, Mr. Reed.

MR. REED: I am having trouble with TOC again, Mr. Little.

MR. WHITE: Mr. Little, would you kindly give us a rundown--

MR. REED: No, no, let me ask my question.

MR. WHITE: Excuse me.

MR. REED: My question is in regards to our decision with the paper company yesterday, Container Corporation, do you still wish to remain with this recommendation on TOC with St. Regis Corporation?

MR. LITTLE: Yes, I think that we would be in favor of leaving the report as it stands. I am cognizant of the recommendations yesterday and I am certain that there will be more discussion on this point. But speaking for myself, I would say we would like to have these recommendations stand with TOC's.

MR. REED: It seems that we are in an imbalance here, but I am sure we will take this up later.

MR. WHITE: If I may say, I think the recommendations from the technical staff which were made requested that they be left in yesterday and I think the conferees determined that the technology was not sufficient that we felt that we could proceed

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in this area at this time. So it was modified as was indicated in the report, I mean at the report of the result of the executive session.

DR. MYERS: We will have a chance, then, to talk about this? Because I am concerned about an increase of three times and we need some further consideration of this whole area.

MR. REED: Dr. Myers, the point is that what is good for the goose has got to be good for the gander.

MR. WHITE: Dr. Myers, I think we will be able to explore this fully and I feel that we will be able to arrive at a satisfactory solution, as was done yesterday in the case of Escambia Bay.

DR. MYERS: Thank you.

MR. WHITE: Are there any other comments?

Thank you very much, Mr. Little.

MR. LITTLE: Thank you, Mr. Chairman.

MR. TRAINA: We would like to now call on Mr. R. W. Davis, Civil Engineer, U. S. Army Corps of Engineers, from Mobile, Alabama.

R. W. Davis

R. W. DAVIS

OPERATIONS DIVISION

MOBILE DISTRICT CORPS OF ENGINEERS

MOBILE, ALABAMA

MR. DAVIS: Mr. Chairman, conferees, ladies and gentlemen.

I am R. W. Davis, Mobile District Corps of Engineers.

At the original conference held in January of 1970 Col. Robert E. Snetzer, then District Engineer for the Corps of Engineers in Mobile, presented the conferees with a description of the activities of the Corps of Engineers within the Perdido River Basin. The Intracoastal Waterway and Perdido Pass Channels and the maintenance dredging required to keep these channels at their authorized dimensions were described. Also, the permit process required by Section 10 of the Rivers and Harbors Act of 1899 was explained.

At the conclusion of the conference, several recommendations were made by the conferees, one of which contained certain restrictions to be placed upon maintenance dredging. In March 1970 the Mobile District Engineer informed the Regional Director of the then Federal Water Pollution Control Agency of reservations about the language of those restrictions. It is understood that the original language of these restrictions possibly will be revised at a later meeting between the

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Environmental Protection Agency and the Corps of Engineers.

MR. WHITE: Are you asking for comment at this time?

MR. DAVIS: No, sir, I was making that as a statement as I understood it.

MR. WHITE: All right, since we interrupted you, I will comment and say that, yes, we had a discussion concerned with this, because no local authorities were moving to develop a shoreline plan. However, it would be my recommendation under these circumstances—and we will discuss this with the conferees, that we make this our plan—that there be no construction dredging allowed in Perdido Bay. Now, if local authorities don't see fit to move in and develop a plan, then, of course, this could be presented and the conferees--

MR. REED: An acceptable plan.

MR. WHITE: An acceptable plan, thank you, Mr. Reed. Then this would certainly be considered by the conferees.

Proceed, Mr. Davis.

MR. DAVIS: Thank you.

Since the previous conference, no maintenance dredging has been required in the Perdido Bay area proper. However, we have had some maintenance of the Perdido Pass Channel in 1970 and are planning to dredge the channel again in the near future. It is presently proposed to place the spoil on the beach areas in the vicinity of the pass to provide much needed

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beach nourishment. Considerable erosion has occurred from wave action over the past couple of years.

Another item of interest I would like to bring to your attention is that a new permit program under the Refuse Act, Section 13 of the Rivers and Harbors Act of 1899, is being established as directed by Presidential order. Under this new program, permits will be required for all present and future discharges into navigable waters or their tributaries. All firms currently discharging wastes into navigable waters or their tributaries without a permit will be required to make permit application to the Corps of Engineers by 1 July 1971. Under these new regulations, decision as to issuance of a permit will be based on an evaluation of the impact of the discharge on anchorage and navigation, water quality standards, and on fish and wildlife resources, and no permit will be issued without certification from the appropriate State or interstate agency that such discharges are consistent with applicable water quality standards nor will a permit be issued if the Environmental Protection Agency recommends denial of the permit for water quality considerations.

After all required regulatory information is received in conjunction with an application, public notice procedure will be followed as in the past to determine the views of all interested parties.

R. W. Davis

Mr. Chairman, again I thank you for the opportunity for making this presentation.

MR. WHITE: Thank you very much, Mr. Davis.

Are there any questions or comments by the conferees?

MR. TRAINA: Mr. Davis, do you know of any plans to do any further construction dredging at all in Perdido Bay?

MR. DAVIS: No, sir, I do not.

MR. TRAINA: Do you think that it would be in order for this conference to recommend, as Mr. White has suggested, that a moratorium on construction dredging be adopted for Perdido Bay?

MR. DAVIS: Well, I see no objection to it. I have no idea of the plans of the private interests that may have some future need for it.

MR. REED: Let me ask Dr. Myers a question, Mr. Chairman.

MR. WHITE: Yes.

MR. REED: Does Alabama require an integrated coastal shoreline plan before the issuance of a dredging fill permit?

DR. MYERS: No.

MR. REED: The provisions of Secretary of the Army Resor's letter to Southern Governors requesting coordinated coastal planning prior to the issuance of dredge and fill permits—it may be in the Governor's office—didn't receive wide

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distribution, but it is a very thoughtful letter about a year ago from the Secretary of the Army saying that he would categorically deny any piecemeal dredge and fill permits if an acceptable plan of development had not been prepared and coordinated with those pertinent State and Federal agencies. I think that is what we have got to get to, which would be of great assistance to the Mobile office. And also I know that the Corps of Engineers in Jacksonville is striking very hard for this, and unless a more comprehensive plan for shoreline development has been prepared, they don't want to accept a piecemeal because the Corps gets blamed for what actually is not the Corps' fault.

I think if we could come up with a recommendation like that, Mr. White, which would assure that both the Florida side and the Alabama side had some planning activities under way before the issuance of a dredge and fill permit we would cover the Corps ourselves with those States.

MR. WHITE: Very good. I agree, Mr. Reed.

Are there any other comments?

DR. MYERS: I believe that there are some studies under way in Alabama, but they have not been completed. I will be in perfect agreement, we ought to have a coordinated plan before beginning on any piecemeal operation.

MR. WHITE: Very good.

J. L. Crockett, Jr.

MR. TRAINA: Next I have a Mr. Jack C. Rosenau, U. S. Geological Survey, Tallahassee subdistrict.

Apparently I have some lists of Federal officials who are here but do not care to speak, unless Mr. Rosenau would like to.

MR. ROSENAU: That is right, I have nothing to offer.

MR. TRAINA: I don't have any other indication of any Federal representatives who wish to make statements.

If there are none, I turn it back to Mr. White.

MR. WHITE: Thank you, Mr. Traina.

I would now like to call on Dr. Myers for the Alabama presentation.

DR. MYERS: Mr. Chairman, I would like to call on Mr. Joseph L. Crockett, Jr., Director of the Technical Staff of the Alabama Water Improvement Commission, to make a statement on behalf of the Commission.

JOSEPH L. CROCKETT, JR.

DIRECTOR OF THE TECHNICAL STAFF

ALABAMA WATER IMPROVEMENT COMMISSION

MOBILE, ALABAMA

MR. CROCKETT: Mr. Chairman and conferees, ladies and gentlemen.

I am J. L. Crockett, Jr., Director of the Technical Staff of the Alabama Water Improvement Commission. I

J. L. Crockett, Jr.

appreciate the privilege of presenting the following statement on behalf of this Commission.

This reconvened conference was requested by Governor Brewer on the recommendation of Dr. Myers in the interest of Alabama citizens whose properties have been affected and also in the interest of the expedient restoration of the quality of Perdido Bay.

The recommendations of the conferees following the first session of this conference have been presented and need not be repeated by me. We are pleased with the recommendation of EPA as stated today that the allowable BOD discharge originally recommended by the conferees for St. Regis Paper Company be significantly adjusted downward in view of an apparent excess generation of BOD within the company's Cantonment plant.

We have learned, through press releases by St. Regis, that construction of an improved waste treatment system was begun by the company this past December. According to these announcements, the new system is scheduled for completion before the end of 1971.

While we are confident that this new system and its construction schedule will be discussed in detail by those who will follow me, information now available prompts us to raise certain questions at this point in this proceeding. One question concerns the construction schedule for St. Regis.

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Referring to the record of the first session of this conference, Mr. H. W. Fales, then manager of St. Regis pulp and paper complex at Cantonment, stated that if approval of the company's plans by Florida authorities was forthcoming, construction of waste treatment facilities would begin in March 1970 and be completed before the end of 1971. Has the delay of some eight months or more in beginning construction affected the announced completion date by St. Regis? Another question relates to the excess generation of BOD reported by EPA. This leads us to question if St. Regis will take steps to reduce its BOD generation through in-plant control concurrently with construction of treatment facilities. Finally, does the treatment system under construction by St. Regis incorporate the latest technology in pulp and paper mill waste treatment and are the components of this system those generally used by the pulp and paper industry?

The record of the first session of this conference clearly defines the foaming problem in Perdido Bay which has detrimentally affected the interests of property owners along the Alabama coast of this bay. This has been a continuing problem and one of serious concern not only to these property owners but others who, in the past, have enjoyed the recreational opportunities afforded by Perdido Bay and would like to do so in the future. A group of property owners along Perdido Bay

J. L. Crockett, Jr.

within Alabama appeared before the Water Improvement Commission on October 9, 1970, and voiced their concern over the quality of the Bay, particularly as it is affected by foam. They also voiced their concern over the expediency with which the problem might be corrected. An investigation of a complaint, made jointly by representatives of our office and EPA on December 8, 1970, confirmed the presence of foam along the Alabama shore in quantities sufficient to injure the aesthetic values of the shore and the bay. Investigations and laboratory examination of samples of foam collected from Perdido Bay have led EPA to conclude that wastes discharged by St. Regis is the major cause of the foam problem in Perdido Bay. We believe that a significant reduction in the foaming potential of St. Regis waste will require in-plant reductions of waste loads as well as a high degree of biological treatment.

Alabama residents affected by the degradation of water quality within Perdido Bay will appear before you and describe in detail the extent to which their interests have been affected. Representatives of the Alabama Department of Conservation will also testify as to the damage to the fishery and other aquatic resources.

We are also concerned with the discharge of inadequately treated sanitary wastes to the tributaries of Perdido Bay, as was reported to the first session of this conference, and

J. L. Crockett, Jr.

trust that significant practice in eliminating such discharges will be reported to you today.

That concludes my statement, Mr. White.

MR. WHITE: Thank you very much, Mr. Crockett.

Are there any comments or questions?

If you would, please proceed, Doctor.

DR. MYERS: Mr. Bernard Sykes, Assistant Attorney General for the State of Alabama, representing the Attorney General.

BERNARD SYKES

ASSISTANT ATTORNEY GENERAL

STATE OF ALABAMA, MONTGOMERY, ALABAMA

MR. SYKES: Mr. Chairman, my name is Bernard Sykes. I represent the Attorney General's Office of Alabama and also the Water Improvement Commission.

Our office has attended the previous conferences that have been held, one in January of 1970, and we appreciate the opportunity of attending this one.

We are chiefly concerned with the problems in Perdido and the main point that we are concerned with is the speed with which the improvements are made. We realize that people in general are becoming more and more concerned with the pollution problem, and we urge that the improvements that have been directed should be undertaken speedily, and we know of no

B. Sykes

provision that would require waiting until New Year's Eve on December 31 of 1972 to finish these improvements that are badly needed now.

MR. REED: Wait a minute, Mr. Sykes. Mr. Sykes, if you are going to make a statement, you have to be able to answer questions.

MR. SYKES: Yes, sir.

MR. WHITE: Thank you, Mr. Sykes.

I assume Mr. Reed has a question. (Laughter.)

MR. REED: Mr. Sykes, apparently you believe in instant pollution control.

MR. SYKES: No, sir, I have been with the pollution agency in Alabama long enough to know that we cannot have instant pollution control, but I do think that a wholesome influence is to move just as fast as we possibly can.

MR. REED: What is today's date, Mr. Sykes?

MR. SYKES: Today's date, sir?

MR. REED: Yes, sir.

MR. SYKES: I think it is February 1971. (Laughter.)

MR. REED: Would you accept a deadline of one year from today or one year from the date that Florida established two years ago for the secondary waste treatment of all industrial and municipal wastes, which is January 1, 1973? Does Alabama have a time schedule like that?

B. Sykes

MR. SYKES: I am not in a position to fix a date, sir. I am simply voicing what I think--

MR. REED: Yes, sir, I hear your voice.

MR. SYKES: --is an opinion, that we should proceed as fast as possible.

MR. REED: I am 100 percent with you, sir, and I hope the same recommendations will be taken back to the Attorney General's Office in Montgomery concerning any form of pollution within the boundaries of Alabama.

MR. SYKES: I think you will find that is our position.

MR. REED: Fine, sir.

MR. WHITE: Well, Mr. Sykes, before you leave, please, are there any other comments or questions?

I would like to make one observation that I probably should have made before Mr. Crockett left the stand and that is this point of the schedule for St. Regis Paper Company.

The Florida Department of Air & Water Pollution Control has an order requiring them to complete secondary treatment facilities, that is 90 percent BOD removal, by November of this year. The conferees at the first session, because the requirements set forth additional goals for the company to achieve, set this second date of December 31, 1972. This has caused some confusion in this area and it is going to be my recommendation

W. Swingle

to the conferees that we adopt as a part of the conference recommendation this 1971 date, at least, so this will be brought into focus and we will consider any other problems which require remedial action by the company and establish another date, presumably this December 31, 1972, date. Or reaffirm it; it has already been established.

Are there now any other comments?

If not, thank you very much, Mr. Sykes.

MR. SYKES: Thank you, Mr. Chairman.

DR. MYERS: Mr. Chairman, I would like to introduce Mr. W. F. Anderson, the Chief of the Division of Seafoods of the Alabama Department of Conservation.

Mr. Anderson, if you will rise. Thank you, sir.

MR. ANDERSON: Thank you, Dr. Myers.

DR. MYERS: Making a presentation for the Conservation Department is Mr. Wayne Swingle, Chief Marine Biologist for the Alabama Department of Conservation.

WAYNE SWINGLE, CHIEF MARINE BIOLOGIST

ALABAMA DEPARTMENT OF CONSERVATION, SEAFOODS DIVISION

DAUPHIN ISLAND, ALABAMA

MR. SWINGLE: Mr. Chairman, ladies and gentlemen.

I am Wayne Swingle, Chief Marine Biologist, Alabama Department of Conservation, Seafoods Division.

Our views on the pollution of Perdido Bay have

W. Swingle

previously been reported by Mr. Johnie Crance at last year's public hearing on January 22, 1970. Our views have not changed since that time. We still feel that this is a deplorable situation and we now feel that there has been a failure in solving the situation. This failure obviously does not lie with the agencies charged with pollution control or we would not be convened here today. The failure obviously lies with the industry discharging paper mill waste.

Since the marine animals utilizing this estuary as a nursery recognize no state boundaries in their movements and since the residents of the State of Alabama living along these waters and earning their livelihood from these waters are forced to live and work on waters degraded from a source within our sister State of Florida, we, Mr. Chairman, would like to request of you and the other members of both the Federal and State agencies charged with pollution control that the industry involved here be ordered to cease allowing waste to enter Perdido Bay. We feel so strongly about this that we recommend that the operation of the industry be closed until such time as they show that they can operate as a responsible member of society.

We thank you for your consideration in allowing us to present our views on this situation. (Applause.)

MR. WHITE: Thank you, Mr. Swingle.

W. Swingle

Are there any comments by the conferees?

Well, we appreciate your concern that you have expressed, Mr. Swingle, and we all, believe it or not, are diligently working toward this end. But I think that the judicious process will require some rule of reason in which we accomplish our goal while not imposing undue restrictions on the company. We haven't heard from the company yet today and I am looking forward to this. I think we may well be coming up with some revised conclusions and recommendations that would send us a little further along the road that you suggest without this drastic measure of shutting the company down.

Are there any comments?

Thank you.

DR. MYERS: Is Mr. Sam Spencer, the Assistant Chief of Fisheries of the Department of Conservation, here at this time?

Sam.

S. L. Spencer

SAM L. SPENCER, ASSISTANT CHIEF OF FISHERIES
GAME AND FISH DIVISION, ALABAMA DEPARTMENT
OF CONSERVATION, MONTGOMERY, ALABAMA

MR. SPENCER: My name is Sam Spencer and I am here representing the Game and Fish Division of the Alabama Department of Conservation. My position is as Assistant Chief of Fisheries, in charge of Fisheries Research. I have a B.S. and M.S. degree in fisheries from Auburn University and have been employed by the Department of Conservation for eight and a half years. During 1970 I served as chairman of the Pollution Committee for the Southern Division of the American Fisheries Society, and I am presently on the Pollution-Water Quality Committees of the American Fisheries Society and the Southern Division of this society.

During the past eight and a half years I have seen a great amount of water pollution, both intra- and interstate pollution. We receive numerous complaints from concerned Alabama citizens about water pollution almost every day. We probably receive more complaints about the pollution in Perdido Bay than any other waters being polluted by outstate sources. We have been concerned about this pollution for the past several years and other members of this division have attended several meetings and conferences concerning this pollution problem.

The source, amount and damage of this pollution has

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been well documented by previous water quality studies conducted by both State and Federal agencies. A report published by the Florida State Board of Health in 1967 showed that the pollution load from the St. Regis Paper Company increased from a population equivalent of 140,000 in 1959 to 205,000 in 1966. In 1970 it was reported that the pollution load had further increased to a population equivalent of 330,000. The 1967 report contained a statement that, "There has been no appreciable effect of the mill discharge at the point where Eleven Mile Creek discharges into Perdido Bay." In 1970 it was pointed out that the pollution at that time was affecting the lower part of Perdido River and a vast portion of Perdido Bay. It is easy to see from these reports how rapidly the pollution problem of Perdido Bay has grown. These investigations have substantiated what the local citizens have been saying about the destruction of Perdido Bay.

We recognize the fact that all waste abatement facilities are supposed to be in operation no later than December 31, 1972, almost two years from now. We want to encourage all agencies concerned to see that it will not be necessary to extend this deadline. We hope that December 31, 1972, and if at all possible a much earlier date, will see a vast improvement in the water quality in Perdido Bay and Lower Perdido River. The 1967 report by the Florida State Board of Health, mentioned

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earlier, contained a recommendation that the St. Regis Paper Company take immediate steps to provide secondary treatment for their industrial waste discharge. I submit to you that this industry has been given more than a reasonable length of time to meet their obligation to the people of Alabama and Florida.

We would like to think that the industry involved, and other sources of this pollution, will make a determined effort to meet their long past due obligation. It's wrong to destroy such a beautiful body of water as Perdido Bay, especially during a time in history when the need for clean water by recreation and industry is accelerating at such a rapid rate.

The Game and Fish Division would like to take this opportunity to commend the Water Quality Office of the Environmental Protection Agency and the Florida Air and Water Pollution Control Board and the Alabama Water Improvement Commission in their efforts to get this pollution problem solved to prevent further damage to the citizens of Alabama. I thank you.

MR. WHITE: Thank you, Mr. Spencer.

Mr. Spencer, before you leave, are there questions or comments?

MR. REED: Yes, I have a comment.

Mr. Spencer, in 1967 when the State Board of Health made their recommendations to the company, I don't know whether you were aware of this, the State Board of Health lacked any real

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enforcement powers. This was a tragedy for our State as well as for your State. Since that time the legislature has seen fit to establish a new branch of government, which became effective in 1969, and I would think, I give you my assurance, that the new agency does have the law and does have the muscle to insist upon a time schedule and be able to keep any company to that time schedule. It would be my hope that we could beat the time limit certain of the State of Florida and I hope to hear testimony to that today.

It would be further my recommendations to the conferees that if that testimony is not forthcoming, that we make it a legal requirement and recommendation of this conference.

To lay to rest any problems between the two States, I am just as concerned for the well-being of Perdido Bay as you, members of your staff, or from the salt water division, from the Attorney General's Office, and the residents of the Alabama side of Perdido Bay. There is no excuse for this type of degradation in the United States in 1971, and I think we are going to get to that conclusion by the time the conference ends.

MR. SPENCER: I hope so.

MR. WHITE: Thank you, Mr. Spencer.

DR. MYERS: Mr. Chairman, I would like to introduce at this time Mr. Larry Johnson and Mr. Joe Addison, Fisheries Biologists of the Alabama Department of Conservation, if they

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would please stand.

Thank you, sirs.

I would like to introduce to this group Dr. Edward Goldsmith, the Health Officer from Baldwin County, and Mr. Charles Zehner, the Sanitarian of Baldwin County. Dr. Goldsmith and Mr. Zehner.

Thank you.

I would like to call on Mr. Gene Hopkins Elebash, a Perdido Bay property owner.

MRS. ELEBASH: I am not a Mister.

DR. MYERS: All right. My mistake, Mrs. Elebash.

(Laughter.)

You can tell the difference. (Laughter.)

MRS. ELEBASH: Thank you.

MRS. GENE HOPKINS ELEBASH

PERDIDO BAY PROPERTY OWNER

EAST PERDIDO BEACH, ALABAMA

MRS. ELEBASH: I am Gene Hopkins Elebash. I am a property owner on Perdido Bay where Soldier Creek comes into the bay.

I am not an expert on anything. I am here on behalf of the mothers and grandmothers of the children of Alabama, and I hope of Florida, who swim and play and are growing to maturity on our beaches of upper Perdido Bay. As a child I came to

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Perdido Bay; my father before me as a child came to Perdido Bay during the summer, and we feel that we are definitely interested parties.

Four years ago we appealed to the State of Alabama because of the filthy water and foam that we were getting along our beach. When you mention immediate stoppage of the St. Regis Paper Company, I don't consider that we are asking immediate stoppage. We have been asking it for a long time. Two years ago we personally appealed to the St. Regis Paper Company and they told us they had never heard of the foam before.

I am only bringing to you one small example of why I am speaking for the children of Alabama. My little grandson, who is four years old, went in swimming. We had told him not to go in on the days when the foam was bad. One day we came down there the foam stretched from the point where the creek comes into the bay 1,200 feet to our house and another 500 feet past the Parsons' house and the Corwins' house and a good 25 or 30 feet out into the bay solid. You could not see the waters of the bay for the foam. This was when we got very upset about this situation.

My little grandson went in and inadvertently got into a pile of this foam which was on the beach. He came back and I was at the house. His mother brought him in and said, "Mother, look, I am afraid Allen is coming down with something." He was

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broken out all over his body with a red rash. It did not last long and we assumed at that time it was caused by the foam. But after this happened, almost under the identical circumstances again, we were quite sure that it was the foam. And I would like to bring this to your attention.

I know that we are not making our money off of Perdido Bay. However, I think that the people of both Florida and Alabama would be very shortsighted if they did not consider the value of Perdido Bay as--I won't say tourist attraction so much because we are all property owners that live down there; it is not a commercial area. However, we have had guests from New Jersey and Connecticut visit us who on seeing our beautiful bay immediately started inquiring about the possibilities of buying property there. This is just our personal experience.

I am going to appeal as a citizen of the United States to the President of the United States to help us in this matter, and I hope that you representatives of the Federal Government relay this appeal to him.

Thank you.

MR. WHITE: Thank you, Mrs. Elebash.

Are there any questions or comments?

MR. REED: Mrs. Elebash, let me tell you, I am sure the President will appreciate hearing from you, but nevertheless I tell you the honest truth, I think more action can come

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from the conferees sitting at this table. I will accept your appeal as an intermediary and we will see if we can give you even prompter action. How is that for a promise?

MRS. ELEBASH: Thank you. I was at the meeting when we were horrified to hear that it would take until December 1972, so I was a little perturbed when someone mentioned 1973.

MR. REED: No, that is one day, madam, between December 31st and January 1st. It is a 24-hour period.

MRS. ELEBASH: Oh.

MR. REED: I agree, let's go back to December 31, 1972, as a maximum--as a maximum--and I don't think--

MRS. ELEBASH: I did not start out wanting the St. Regis Paper Company closed because I understand that they provide a livelihood for quite a number of people. But on the other hand, if they continue to do nothing and we have seen nothing but increase in the amount of pollution, we have seen no improvement--

MR. REED: I think you have a highly legitimate complaint and we are taking it to heart. All right?

MRS. ELEBASH: Thank you.

MR. WHITE: Thank you, Mrs. Elebash. (Applause.)

DR. MYERS: Mr. Chairman, several of the representatives from Baldwin County representing county government have expressed real concern about this conference. One of those is

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Mr. Clarence H. Bishop, Commissioner from Baldwin County. Mr. Bishop, if you would stand and be recognized.

Thank you, sir.

Mr. Albert P. Elebash, representing the Perdido River Basin Anti-Pollution Association.

ALBERT P. ELEBASH

PERDIDO RIVER BASIN ANTI-POLLUTION
ASSOCIATION, MONTGOMERY, ALABAMA

MR. ELEBASH: This is a family affair this morning. I also would like to say that I represent myself as a property owner on Perdido Bay.

I can only reaffirm what my wife has said. We have suffered four years of frustration. I first brought this whole problem personally, and many other people have done it before, to the attention of the State of Alabama in writing in January 1967. This is four years later and as far as we are concerned nothing has happened.

I appeared before the Alabama Water Improvement Commission in the October meeting in 1970, as Dr. Myers remembers, and my impression of the results of that meeting at which Mr. White was a participant is that the St. Regis Paper Company has not only not improved anything, they have gone backwards. It is my impression that this is an old, antiquated, overloaded mill and probably would be to the St. Regis Paper Company's

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advantage to tear down and start over again.

Frankly, it disturbs me greatly when I see in this new report dated February 1971 an apparent relaxation of the standards set in the conference in January 1970. I sincerely hope that I misunderstood the TOC limitations that Dr. Myers referred to as three times the limits previously determined, and maybe I misunderstand it. I am not a technician, but it seems to me we are going backwards.

Now, another thing that disturbs me greatly is the fact that no one as yet has given me any assurance whatsoever that if the St. Regis Paper Company did everything that this report says do tomorrow morning it would get rid of the foam. And this I cannot understand. I don't know anything about the paper business, but I am a graduate engineer, and I can't believe that the technical knowledge in the paper industry isn't such that they can solve this problem. Gentlemen, in four years you can design and build a new mill. We have some excellent examples of that in our part of the country. I think they are doing a good job.

Now, Mr. Crockett mentioned a 9-month delay by the St. Regis Paper Company in starting the construction, and yet we see disturbing information, a clipping from the Pensacola paper a couple months ago, headlines, "Firm to Aid Perdido Bay Cleanup." Well, this is again another frustration. As far as we are

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concerned, they are causing the trouble.

I am not satisfied with the time schedules. I don't know what a reasonable time schedule should be. But as my wife said, I think four years is enough.

As far as I am concerned, I would be perfectly willing to see this panel issue a cease and desist order and put a padlock on the mill. I feel that strongly about it. I think we have suffered enough. And unless I can see some concrete action, some real meaning in what St. Regis is doing or trying to do or we hope will do, I just can't see any other recourse for me personally except to enter a damage suit against the St. Regis Paper Company, and I am seriously considering it.

Thank you, gentlemen. (Applause.)

MR. WHITE: Thank you, Mr. Elebash.

I would like to ask Mr. Traina to respond to your statement concerning the total organic carbon.

MR. TRAINA: First, Mr. Elebash, let me tell you, and I think you know this, our agency has been working with you folks down here with the two States involved for the last few years, we are as concerned about the situation as you folks are.

With regard to the study that was reported on this morning, and the reason I asked Mr. Little to clarify that was that I wanted to make sure that we all fully understood what the impact of those recommendations were. Now, at the previous

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study that was reported on last year there was some concern about the representation of the samples that were taken, whether they were in fact representative of what was going on in the mill.

We went back to the mill in cooperation with the States and the mill, I might add, and looked in great detail through their process, and frankly, as Mr. Reed observed in layman's terms, we found the process to be one that needed a lot of in-house changes and cleanup. We found that the amounts of waste generated by the mill were in excess of those that were reported by the paper industry itself as an average figure for this part of the country. So based on those studies, we did revise our recommendations and they came out that we would reduce the BOD discharge by some 3,000 pounds, and frankly also came out that the TOC that we initially measured was much lower than what was generated.

Now, we had some discussion, I don't know whether you were here yesterday, regarding this whole question of TOC, and while our technical people at the Federal level have made some rather strong recommendations on this, there was some discussion regarding the technology of TOC methods of measurement as well as treatment. At the conference yesterday, and I don't want to confuse the two because in a way they are separate items, but the conference yesterday recognized some of these problems with

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TOC and made some appropriate recommendations concerning TOC in the Escambia area. Whether this conference will do that, I don't know.

I do want to assure you, though, that the recommendations that presently are in the report that was delivered this morning represent the best technical information that we have been able to obtain concerning the operation of the St. Regis Paper Mill. I think you will find that the recommendations on BOD have been reduced significantly from what they were before and represent our best estimate of what we can expect a paper company of this kind to do.

MR. ELEBASH: May I ask a question there?

MR. TRAINA: Yes.

MR. ELEBASH: You say may expect a paper company of this kind to do. What do you expect a modern, well-equipped and well-designed paper company to do?

MR. TRAINA: Well, this is why we use the average figure, sir, because this represents the average of the industry in this part of the country and this is why we came to these figures.

I might add one other comment, s'r. In the initial report that was presented last year, this conference recommended that the company conduct a study for a closed system. Now, I understand, I would hope that the company would report on this

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study now. I would like to make this comment with respect to your situation on foam or your comments on foam. We have recognized, as you well know, this problem of foam, we have reported last year and again this year that the foam is primarily resulting from the discharge of the St. Regis Paper Mill. We have reported this on two occasions. I think--I not only think but I can assure, based on the technology that I am aware of, that if we do go to the closed system in St. Regis, and I would hope that the company will report on this, that obviously the foam problem would be resolved because they would have a closed system.

I might also add that the problems of BOD and TOC would also be resolved. I would hope that the company would report on their findings this past year on the study they are making regarding a closed system.

MR. ELEBASH: I sincerely hope so. I am not sure that I understood the answer you gave me, but to reaffirm my point, I don't think you ought to set standards for the St. Regis Paper Company to suit the St. Regis Paper Company. I think you ought to set standards that meet the fairest, highest standards of the state of the art of the industry, and they aren't coming even close to it.

Now, there is a mill in Vermont, I was just reading in the U. S. News and World Report this past week, where the

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mill was replaced by a new mill. Maybe that is a good solution. The stockholders are probably much better off for it. Or maybe this mill needs to reduce its output. I don't know.

But I know that I am being damaged and I have been talking for four years and listening for four years and it is worse now than it was four years ago and this is the thing that is frustrating and disturbing to me. All these technical aspects, I appreciate the work that you folks in the Federal Government have done, because to be honest about it, as I have expressed to the Alabama Water Improvement Commission, they have given me no help at all up to this point. I am delighted to hear some of the statements made this morning, Mr. Beck and Dr. Myers. We will certainly back up the requests, as far as I am concerned, to padlock the mill if it is necessary, and I hope they may.

MR. REED: I have a question.

MR. WHITE: Yes, Mr. Reed.

MR. REED: I am deeply concerned about the progress made at St. Regis, Mr. Elebash, and I am also deeply concerned about any other wastes entering the Perdido Bay through any other tributaries. You and your compatriots, who I can see are genuinely concerned citizens, have you taken an interest in the other waste discharges coming into the tributaries into the Perdido?

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MR. ELEBASH: Yes, but certainly not to the extent that we have with the St. Regis, because we are told by the Federal Government that 98 percent of our problem, roughly speaking, is from the St. Regis Paper Company.

MR. REED: Right.

MR. ELEBASH: And we understand that there were some others, such as some sewage disposal plants on the Florida side, that needed attention.

MR. REED: Florida and Alabama side.

MR. ELEBASH: Could be. Listen, it doesn't matter to me whether it is in Florida or Alabama. I am against all pollution.

MR. REED: No, we have got to look at this entire tributary system.

MR. ELEBASH: I agree.

MR. REED: Obviously we have got one major company involved, but we have got to look at the entire spectrum if we are going to hold onto this bay at all.

MR. ELEBASH: I agree with you.

MR. REED: And I am with you 100 percent.

MR. ELEBASH: We met with the Attorney General of Alabama, Mr. MacDonald Gallion*. We had hoped that Mr. Baxley, the Attorney General of the State of Alabama, would be at this meeting. We talked to him last week and he assured us he

*Former Attorney General.

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would make every effort to be here, but unfortunately the Federal Government and its courts had other duties for him.

But we corresponded with your office and with Mr. Faircloth, the then Attorney General of the State of Alabama. We gave you a report on--I say "we"; the Attorney General of Alabama--on what was being done on the Alabama side pollution-wise and you gave a report back on what was being done on the Florida side pollutionwise. I don't remember all the details of it, but the essence of it is that the St. Regis is still the major culprit and we are fortunate that there is only one.

MR. REED: That is what we are here for today.

MR. WHITE: Mr. Elebash, we certainly appreciate your comments, and I am sure the conferees are going to take this statement into account in their deliberations as we go into executive session.

Are there any other comments or questions?

MR. ELEBASH: Thank you.

MR. WHITE: If not, Dr. Myers, I wonder if we might call a 10-minute recess here?

Very good, we will stand recessed for 10 minutes.

(RECESS)

MR. WHITE: Let's reconvene, please.

Dr. Myers, if you would, please.

DR. MYERS. Mr. Chairman, I would like to ask two

*Attorney General Faircloth is Florida's Attorney General.

representatives of the Marine Sciences Institute at the University of Alabama, Dr. George Crozier, who is the Assistant Director, and also Mr. Thomas C. Olsen, a Research Assistant, if they would stand and be recognized. There they are in the back.

Thank you, sirs.

Mr. Chairman, I would like to yield the floor at this time for the purpose of trying to clarify exactly some of the position from industry, St. Regis or somebody, and I will turn it back to you.

MR. WHITE: Thank you, Dr. Myers.

I might explain that the conferees huddled briefly during our recess and decided that possibly we had the cart before the horse here—that maybe we should hear from the company, get their entire presentation, and then go back to the routine that we set forth previously, that is, a continuation of Alabama's presentation before getting to Florida's complete presentation. So we will make this deviation from that procedure that I set forward.

I will now call on Mr. Reed for the company's presentation.

MR. REED: Thank you, Mr. White. Thank you, Dr. Myers.

I will call upon the St. Regis Company in whatever order they wish to appear.

R. T. Hudson

RUSSELL T. HUDSON, RESIDENT MANAGER

ST. REGIS PAPER COMPANY

PENSACOLA, FLORIDA

MR. HUDSON: Mr. Chairman, conferees, ladies and gentlemen.

My name is Russell Hudson. I am Manager of the pulp and paper mill operated by St. Regis Paper Company north of Pensacola in Escambia County, Florida.

We would like to bring you up to date with respect to the company's successful efforts to meet and comply with recommendations made by this conference 13 months ago. Also, we would like to respond to some of the findings presented in the various reports today.

Our statements this year are more technically oriented and even more positive than at the previous conference. Therefore, I have asked two persons in our organization who are intimately associated with the problems on a full-time basis to speak to the conferees.

Let me first introduce Mr. Herbert J. Munson, of our Corporate Engineering Division located in Jacksonville. Mr. Munson has overall project responsibility for environmental engineering throughout the company.

Mr. Munson.

H. J. Munson

H. J. MUNSON, ENVIRONMENTAL ENGINEER

CORPORATE ENGINEERING DIVISION

ST. REGIS PAPER COMPANY, JACKSONVILLE, FLORIDA

MR. MUNSON: Mr. Chairman, conferees, ladies and gentlemen.

My name is Herbert J. Munson, Environmental Project Engineer for St. Regis Paper Company, located in Jacksonville, Florida.

When this conference on interstate waters of Perdido Bay was convened in January last year, St. Regis Paper Company was awaiting approval of its final engineering report from the State of Florida on major improvements to its wastewater treatment system at Pensacola.

The proposed improvements presented to this conference last year met the recommendations adopted by the conference and subsequently approved by the Florida Department of Air & Water Pollution Control. In developing details, however, it became evident that the dredging of existing basins to accommodate aeration equipment presented not only construction problems, but also a temporary hazard to the waters of Perdido Bay. In order to avoid such problems and to maintain the present degree of wastewater treatment during construction, a modification of the original concept was developed and approved by the State of Florida.

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This new concept not only avoided the construction pitfalls inherent in the original plan, but provided for a system markedly superior to the original plan and without jeopardizing the final completion date.

I can report to you that construction is now well under way and that all major equipment, such as aerators and electrical gear, is on order with delivery scheduled in ample time to meet the construction schedule. All is in order to meet the completion date of December 1971--and I repeat 1971--with time to spare. I would like at this time to explain briefly the new plan which is presently being implemented.

A new primary settling basin having a retention time in excess of 24 hours is being constructed. This is in contrast to the normal retention time of four or five hours for a mechanical clarifier, and, therefore, will provide a high degree of primary clarification. This new primary basin will replace the two existing settling basins that are now used alternately. Mechanical cleaning of the new basin will be accomplished by a floating dredge which will pump the settled material to a spoil area on company land. The dredge was purchased recently and is being used presently in the maintenance of existing settling basins.

The new secondary system, which will consist of two aerated lagoons operating in parallel, is followed by a third

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lagoon. The effluent from the third lagoon will flow by way of aerating riffles to a final retention pond. The primary and secondary system will provide a total retention time of six days. The aerated lagoons will contain mechanical aerators having a total combined rating of 1,500 horsepower. This is 300 horsepower in excess of that proposed to the State and provides a margin for equipment maintenance and possible deviation from the performance predicted on the basis of the empirical equation commonly used in the design of secondary treatment systems.

Because the mill is deficient in nutrients normally present in sanitary systems, a nutrient feed system will be provided to maintain the biological activity on which the reduction of biochemical oxygen demand depends. The feed system will be carefully regulated to avoid supplying nutrients in excess of the biological needs.

The entire facility has been designed to provide the degree of treatment required with an adequate margin of safety. Mr. Chairman, that is a basic sketch of the project now under construction at the St. Regis Pensacola mill.

Now I would like to comment on the recommendations made to St. Regis by this conference last year. The first recommendation was stated as follows:

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"There shall be an overall removal efficiency of 90 percent for carbonaceous waste material from the St. Regis Paper Company. The St. Regis waste effluent, as measured below the present riffle terraces, shall not exceed 8,880 pounds per day of five-day BOD, and 2,610 pounds per day of total organic carbon. All settleable solids shall be removed."

While essentially all settleable solids are now being removed, the new system will assure compliance with the requirement to remove all settleable solids. The retention time in the primary basin, plus that in the secondary aeration basin and the final retention pond, assures performance on this score. And I might add that through in-plant modifications, we have increased the removal of solids by 16,800 pounds since this conference last year.

The aerated lagoons, provided as they are with excess aeration capacity, assure the reduction of BOD₅ below the required limit of 8,800 pounds per day.

The present project is based on historical data. In the meantime, efforts have been made to reduce BOD input loading to the system. With process improvements, the raw waste BOD has been reduced some 5,000 pounds per day, and efforts are continuing to make further reductions.

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The second recommendation of last year's conference was as follows:

"The St. Regis Paper Company shall remove the foam-causing constituents from the effluent."

The reduction of foaming potential of pulp mill effluent is one of the most troublesome problems in the industry. We have taken samples of foam gathered on occasion from Perdido Bay and have made tests on such samples at the Pensacola mill laboratory as well as at the company's research center at West Nyack, New York. Results have not been conclusive, since tests reveal constituents both common to and foreign to mill effluent.

While the St. Regis effluent may be a factor, perhaps the major factor contributing to the foaming potential in Perdido Bay waters, we are convinced that it is not the only factor. The reduction in foaming potential resulting from increased secondary treatment is expected to be on the order of 50 percent. Foam stability will also be reduced, but by an unknown amount. The next two recommendations of last year's conference were as follows:

"The St. Regis Paper Company shall reduce the color of its waste discharge to meet the water quality standards of Florida, Alabama, and the Federal Government."

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"St. Regis Paper Company shall make a feasibility study of construction of an essentially closed system involving recirculation, treatment and reuse of its process water. A progress report shall be submitted to the conferees by January 1, 1971."

St. Regis is conducting a research program in cooperation with the Federal Government to investigate better methods of treating wastewater, including methods for increased water reuse and for reducing color bodies in the wastewater. Essentially, this is a feasibility study as recommended by the conference, and it is sincerely hoped that it may result in a major breakthrough in the field of wastewater treatment.

This research is financed partially by the Water Quality Office of the Environmental Protection Agency through a Federal grant of \$878,000. St. Regis committed approximately \$1.5 million to the project, with results to be made available to the pulp and paper industry nationwide for pollution abatement.

The major portion of the work is being done here at Pensacola by the company's Research and Development group, which is headquartered in West Nyack, New York. A progress report of this research was provided members of the conference by January 1, 1971, as required.

H. J. Munson

We have with us today Mr. Edward W. Lang, senior development engineer with our technical group. He will make a brief presentation bringing you up to date on the status of this project.

With your permission, Mr. Chairman, I call on Mr. Lang to make his presentation.

MR. WHITE: Thank you. But before you get away--

MR. MUNSON: I am coming back.

MR. WHITE: All right. Would you like for us to hold all questions and ask them at one time at the end of your entire presentation?

MR. MUNSON: If you would, please, sir.

MR. WHITE: Fine.

MR. MUNSON: Thank you.

EDWARD W. LANG, SENIOR DEVELOPMENT ENGINEER
RESEARCH AND DEVELOPMENT, ST. REGIS PAPER COMPANY
PENSACOLA, FLORIDA

MR. LANG: Mr. Chairman, conferees, and the audience.

My name is Edward W. Lang. I am Senior Development Engineer with the Research and Development Department of St. Regis.

I would like to review our project and give you the status on the St. Regis water quality office study on the use of activated carbon for renovation in kraft mill effluent.

E. W. Lang

The St. Regis Company, under contract with the Water Quality Office of the Environmental Protection Agency, has been engaged since July 1969 in a 2-part program for the development of an economical system for maximum water reuse in the kraft pulp and paper industry as a means of water pollution control and water conservation.

I have some slides I would like to use in my presentation. Could we have the lights dimmed?

MR. WHITE: Apparently we can have them dimmed.

MR. LANG: Yes, that is fine.

The first slide, please.

The first part of the program involves studies leading to the development, construction and operation of a pilot plant to treat pulp mill effluent with activated carbon and engineering evaluation of the results. We expect to have the pilot plant in operation at Pensacola by late summer. Part two will be initiated at a later date and it will involve the pilot plant production of activated carbon.

The program is based on two key concepts. One concept is that pulp mill effluent can be treated with activated carbon and reused as feed water to the mill. The other concept is that carbon used for treating the effluent can be produced as an inherent product of the pulping process.

The basic objective of this project is the development

E. W. Lang

of an economical system for maximum water reuse, based on the use of activated carbon, as a means of water pollution control and water conservation. Maximum water reuse, though not strictly definable, is assumed to be in the order of 90 percent. Ten percent of the usual fresh water input to the kraft mill, it is assumed, will be discharged primarily to purge inorganic salts at nonpolluting levels.

Slide 2.

As effluent standards approach those used for feed water to a mill, it is obvious that there will be more and more of the water effluent used as a feed water. One of the most promising methods of removing organic compounds as well as color from pulp mill wastewater is by treatment with activated carbon. Carbon treatment appears to be economically feasible, particularly if a low-cost carbon is available. The St. Regis kraft recovery process that is now under development promises to provide large amounts of low-cost activated carbon suitable for effluent treatment.

What quality of water is needed for recycling?

It is difficult to determine what level of impurities can be tolerated in the water that is to be reused in the mill. The quality of the water that can be tolerated depends on the specific use and to a large extent on the experience of the operator. From a study of water quality standards used by many

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mills, we concluded that most operations in the mill could tolerate 50 milligrams per liter of TOC, or total organic carbon, and 100 APHA color units. Therefore, the goal we are using for the lab and pilot plant studies are these values. The treatment methods we will use in the pilot plant to reach these levels will also reduce other impurities to acceptable levels.

Our first task in this project was to make studies in the laboratory with various mill effluents.

Next slide.

We obtained samples of wastewater streams from several points within three of our southern kraft mills. We analyzed each sample for seven or more properties. This slide shows one of the water samples being analyzed for sodium and metal ions in atomic absorption spectrophotometer. The properties that we use most in our characterization of the effluent samples and in evaluating treatment methods are total organic carbon, TOC, and APHA, color.

Next slide.

The TOC analysis provides a measure of the organic content in one minute as compared to five days by the BOD method. In this picture we have a gas-phase chromatograph, with which we analyze for specific organic compounds.

Next slide.

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This slide illustrates the types of streams that we have studied, the relative quantities of wastewater in each, and the color and the TOC concentrations in each. Even though it may not be visible to everyone, there are wide variations in these various streams in the concentrations of color and TOC.

Next slide.

Various methods of treating each of the streams were used in an intensive laboratory program extending from October 1969 to March 1970. Three basic treatment methods were used: biological oxidation, massive lime, and activated carbon. Various combinations or sequence of these were evaluated to determine which should be used in the pilot plant program. This slide shows two carbon adsorption columns that are being used to treat total mill effluent.

Next slide.

The percentage removals of color and TOC from total mill effluent by the various treatment sequences are illustrated in this slide. The removals by carbon alone are not high, as you note, but they are greater when the water is treated continuously in granular column carbon columns or by stage-wise treatment with pulverized carbon. They show the various sequences that we have tried and, as I will note in a minute, the ones that we have selected from this.

Next slide.

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We evaluated one or more samples of activated carbon from seven manufacturers. This comparison indicates that the four more promising carbons had very similar adsorption properties at the dosage of carbon selected for those particular experiments.

On the basis of preliminary cost estimates for full-scale treatment plants, and on the results of the laboratory studies, we concluded that the most promising sequences to be used in the pilot plant are:

- 1) Primary clarification followed by carbon adsorption;
- 2) Lime treatment without prior clarification followed by carbon adsorption; and
- 3) Primary clarification followed by biological oxidation and then by carbon adsorption.

We concluded that the pilot plant work should be based on the total effluent of the kraft pulp and paper mill but does not include bleach wastewater. Information from the treatment of total mill effluent would be applicable to most of the effluent water now being discharged from pulp mills and the information would be more generally useful to the pulp and paper industry. Effluent from a bleach mill will not be included because this effluent contains not only organics and color, but a moderate concentration of sodium chloride, which is not removed by the

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methods we have considered.

Next slide.

The location selected for the pilot plant was at the Pensacola mill, because St. Regis already has a research and development facility here; it is a diversified mill with a wide range of products, and it is an older mill that is typical of many mills in this part of the country. The site selected shown here, which is on the ditch carrying the total effluent from our No. 2 mill, and is just south of the mill not far from U. S. Highway 29 that you pass going out north of town.

Next slide.

The design for the pilot plant has been completed and the purchase specifications for the pilot plant building, equipment and the instrumentation, and the construction of facilities have been submitted to and approved just this week by our WQO project officer, Mr. George Webster. Requests for bids will be sent out as soon as possible. Here we see two of our engineers working on the design. In the foreground are two beakers, the dark one containing untreated effluent, the other containing the same water that has been treated with activated carbon.

Next slide.

This is a flow diagram of the pilot plant. It may not be apparent to many in the audience, but at the top we have— we are pumping water from our effluent ditch at the rate of 30

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gallons per minute or 43,000 gallons per day. It is pumped into an equilibration basin, represented at the top, that will provide a 4-day composite sample of the effluent. This basin will be used for biological oxidation with a surface aerator when that part of the sequence is being evaluated. Primary clarification is also provided in one corner of this basin. The clarified water can then be pumped to three units below, the first being the lime treatment, the next two being two modes of carbon treatment. Piping is provided for any desired combination of treatment in series.

The two carbon treatments are: One, granular carbon adsorption that has been used for treatment of municipal and industrial wastewaters; the other is a new process developed under this grant in which the water is contacted with pulverized carbon to give more rapid adsorption at a lower overall cost. The carbon to be used in these units will be purchased from commercial sources. The carbon from our new recovery process will not be ready for testing in this phase of the program.

We have provided for obtaining all the data needed for detailed evaluation of the operation. In this pilot plant we will determine the best modes of operation of the several treatments, singly and in combination. We expect to obtain the information needed in designing full-scale plants and in

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determining the capital and operating costs of the several treatment sequences.

Could we have the lights on and slides off, please?

We expect to complete the construction of the pilot plant by late this summer and to complete the investigations in the pilot plant that are called for in the scope of the grant by early next spring, 1972.

The engineering studies will be made as data become available from the pilot plant to determine the best sequences of treatment for a typical mill effluent. We will prepare designs of treatment plants for a typical pulp mill and provide estimates of capital and operating costs.

We will then submit to WQO by late spring of 1972, a year from now, a report summarizing all results and details. I understand the WQO will make the report available to anyone requesting it. We will assist WQO in disseminating information from the pilot plant, especially in conducting visitors through the plant as requested by WQO.

In summary, we believe real progress has been made to develop a process for treating pulp mill effluent to make it suitable for replacement for as much as 90 percent of the feed water to a typical mill. The most promising methods are primary clarification followed by carbon adsorption or lime treatment followed by carbon adsorption. These methods were satisfactory

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in laboratory experiments for reducing TOC and color to a level that make the water generally satisfactory for reuse in the pulp mill. This treatment in combination with maximum water reuse may be expected to result in a final discharge from the mill, a typical mill, of as little as two percent of the TOC and one percent of the color now in the untreated effluent. These promising expectations and the technical feasibility of the concept need to be confirmed in the pilot plant. The costs of such treatment cannot be determined until after the pilot plant studies have been completed. However, the cost will be substantially greater than that by the presently used biological oxidation in aeration basins. Much work by each mill will be required to determine the best means of increasing the reuse of water within each part of the mill to reduce the amount of water that must be treated by carbon adsorption and thereby reduce the cost of such treatment.

That concludes my statements. I will be glad to answer any questions.

MR. PATTON: I have one, Mr. Chairman.

MR. WHITE: Yes, Mr. Patton.

MR. PATTON: As I understood, Mr. Lang, you said that the pilot plant work was based on the total effluent from the typical mill but not including that of the bleach plant?

MR. LANG: Yes.

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MR. PATTON: And then you go on to say that the St. Regis plant at Pensacola was selected. Did you take the wastes excluding the bleach plant wastes?

MR. LANG: Yes, the bleach plant is a part of our No. 1 mill. We are taking the total effluent from our No. 2 plant.

MR. PATTON: What about the bleach plant waste, then, would you consider that this is not applicable to that from what you can see today?

MR. LANG: As far as we know, the organic type of contaminants are not affected by putting the bleach effluent with it. But it does increase the inorganic sodium chloride content, and carbon adsorption lime treatment and biological oxidation do not remove the sodium chloride inorganic salts.

MR. PATTON: You would expect, then, that if bleach plant wastes were included this would cause a chloride buildup?

MR. LANG: If it were recycled, to a large extent it would build up.

MR. PATTON: So then if this concept were carried forward, let's say at the Pensacola mill of St. Regis, you would have to have one treatment plant for the nonbleach plant wastes and a separate treatment plant for the bleach plant wastes?

MR. LANG: That may be the reasonable way to handle it. There is work under way, by government agencies primarily,

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on removing these dissolved salts from water, which at the time it becomes needed will be available.

MR. WHITE: Any other comments or questions?

MR. REED: Would you like to discuss foaming with me or would somebody else do that?

MR. LANG: I don't have any particular information on that.

MR. WHITE: Mr. Traina.

MR. TRAINA: Are we in a position now to discuss the entire situation with St. Regis or shall we wait?

MR. LANG: I will turn that back over to Mr. Munson.

MR. TRAINA: I would like to direct some more questions to you, sir, if you are available later.

MR. LANG: I will be.

MR. TRAINA: I believe it would be more appropriate to hear the rest of it first.

MR. LANG: All right.

MR. WHITE: Excuse me, Mr. Lang, before you leave.

Dr. Myers, any questions?

Just for the purpose of clarifying the record, I would like to ask that you submit negatives and copies of the charts, schematics and what-not that you showed on the projector.

MR. LANG: I will.

MR. WHITE: And we will not reproduce any of the

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photographs, but we will have these on record in our official transcript that we keep and is not sent out in case we ever need it for any further proceedings under the Federal Water Pollution Control Act. But I think that the charts and schematics and what-not are relevant and we will reproduce those into the record.

MR. LANG: Very good.

MR. WHITE: Thank you, Mr. Lang.

(The photographs referred to above are marked Exhibit 1 and are on file at the EPA-WQO Headquarters in Washington, D. C., with a copy on file at the EPA-WQO Regional Office in Atlanta, Georgia.)

(The charts and schematics referred to follow:)

FWQA-ST. REGIS PROGRAM

EFFLUENT TREATMENT STUDY and PILOT
PLANT DEMONSTRATION

DEVELOPMENT of
ACTIVATED CARBON PRODUCTION

ACTIVATED CARBON for WATER RENOVATION

EFFLUENT STANDARDS APPROACHING FRESH
WATER STANDARDS

RE USE INDICATED

ACTIVATED CARBON ADSORPTION-A KEY STEP

ECONOMIC FEASIBILITY WITH LOW-COST A.C.

ST. REGIS RECOVERY TO PROVIDE LOW-COST A.C.

INDIVIDUAL EFFLUENTS

EFFLUENT SOURCE	QUANTITY GAL/TON PULP	COLOR APPL. UNITS	TOC	
			MG/L	LB/TON PULP
TURPENTINE UNDERFLOW	50	61	3,077	1.3
EVAPORATOR CONDENSATE	1,520	640	667	8.5
PAPER MACHINE WHITE WATER	2,780	131	83	1.9
WOODYARD	456	411	31	0.12
PULP MILL AND OTHER	5,200	—	690	30

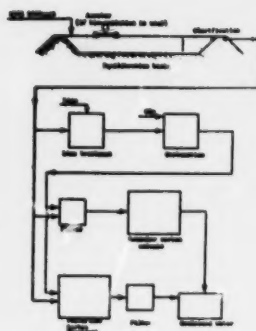
EFFECT OF TREATMENT SEQUENCE ON REMOVAL OF COLOR AND TOC BY 1g/l A.C.

TREATMENT SEQUENCE	CUMULATIVE REMOVAL %	
	COLOR	TOC
CARBON	61	44
BIO	32	41
CARBON	78	73
LIME	95	37
CARBON	99.4	64
BIO	32	41
LIME	95	—
CARBON	98.8	79
LIME	92	37
BIO	78	87
CARBON	98.7	78

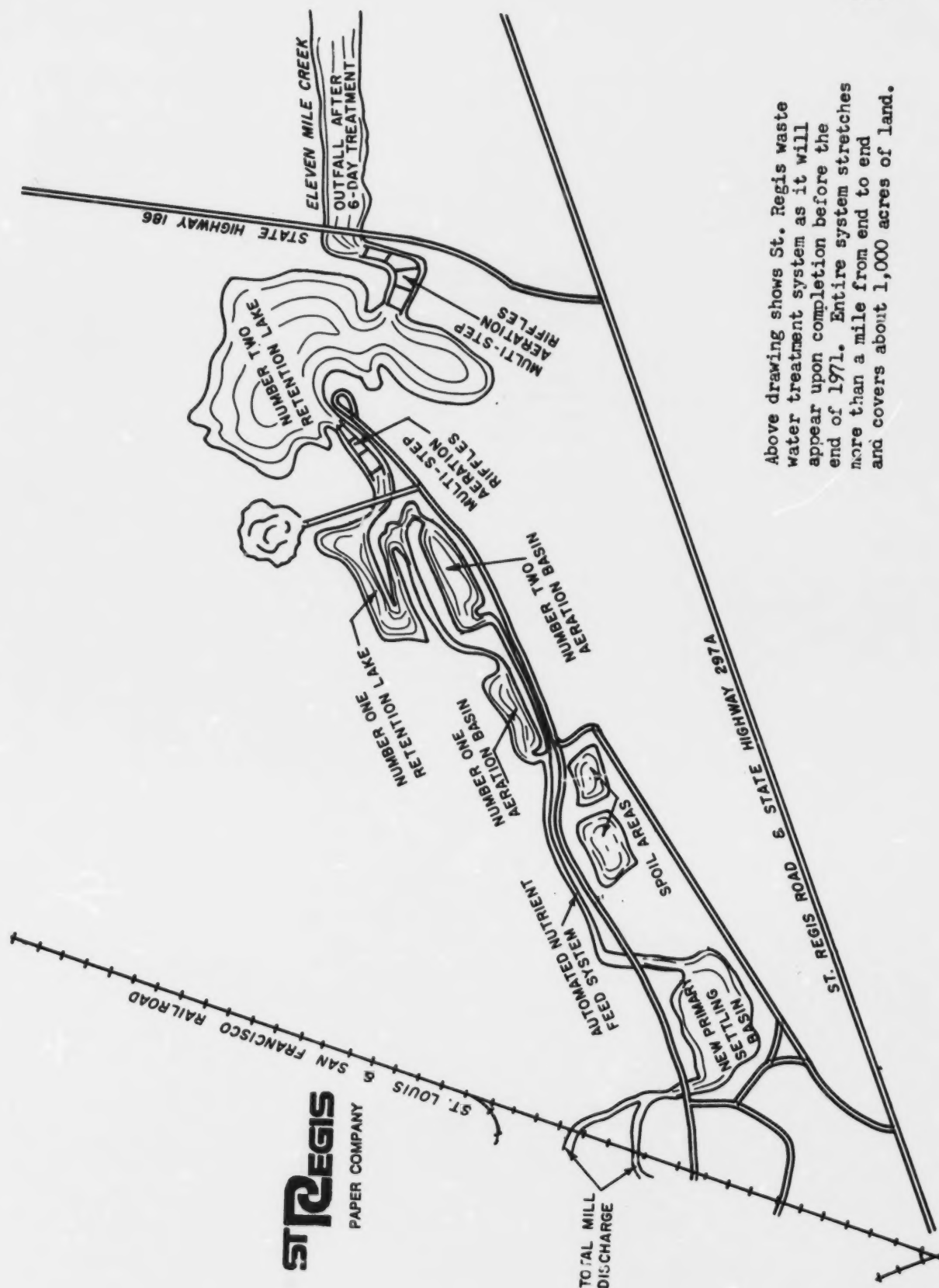
CARBON COMPARISON

REMOVAL of COLOR and TOC from TWE by 1g/1 A.C.
INITIAL COLOR 948 CU, TOC 138 mg/l

CARBON		REMOVAL %	
MFGR.	I/O.	COLOR	TOC
WESTVACO	AN	61	46
NORIT	NC	49	42
CALGON	F-400	53	46
ATLAS	KB	66	49



Flow Diagram of Proposed Wastewater Plant



Above drawing shows St. Regis waste water treatment system as it will appear upon completion before the end of 1971. Entire system stretches more than a mile from end to end and covers about 1,000 acres of land.



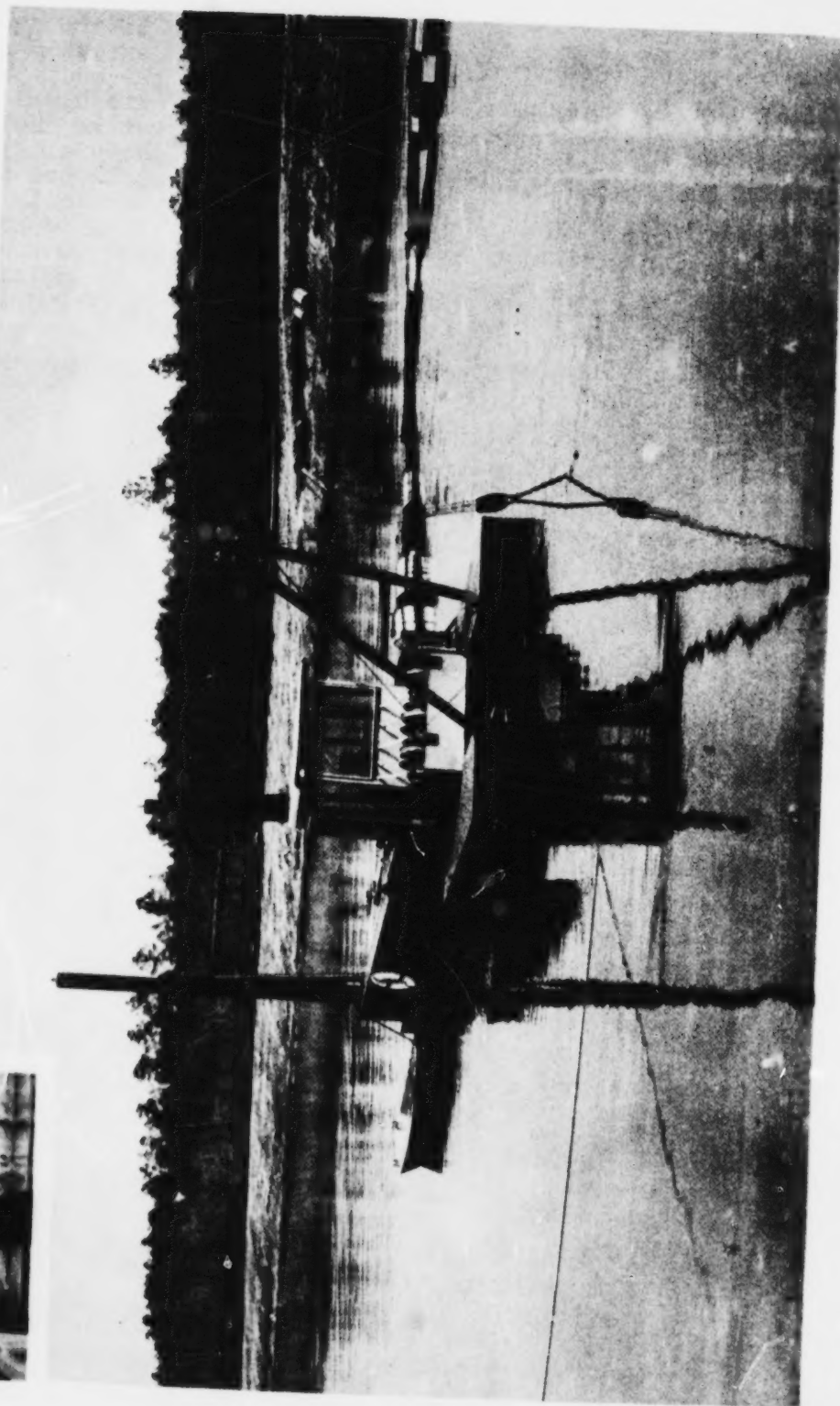
Shown here is an aerial view of the new primary treatment basin now being excavated adjacent to St. Regis Kraft Center. Construction began early in December of 1970. This photo was made on February 15, 1971. The excavation of this basin will require more than six months of earthmoving to complete. The total mill flow ditch is visible at the far right. This flow will be diverted into the new basin when it is finished.

Taken at ground level on February 16, 1971, this photo shows equipment at work in the new primary settling basin and the installation of sluice pipes from which the waste water will enter the new basin once this facility is completed later this year.



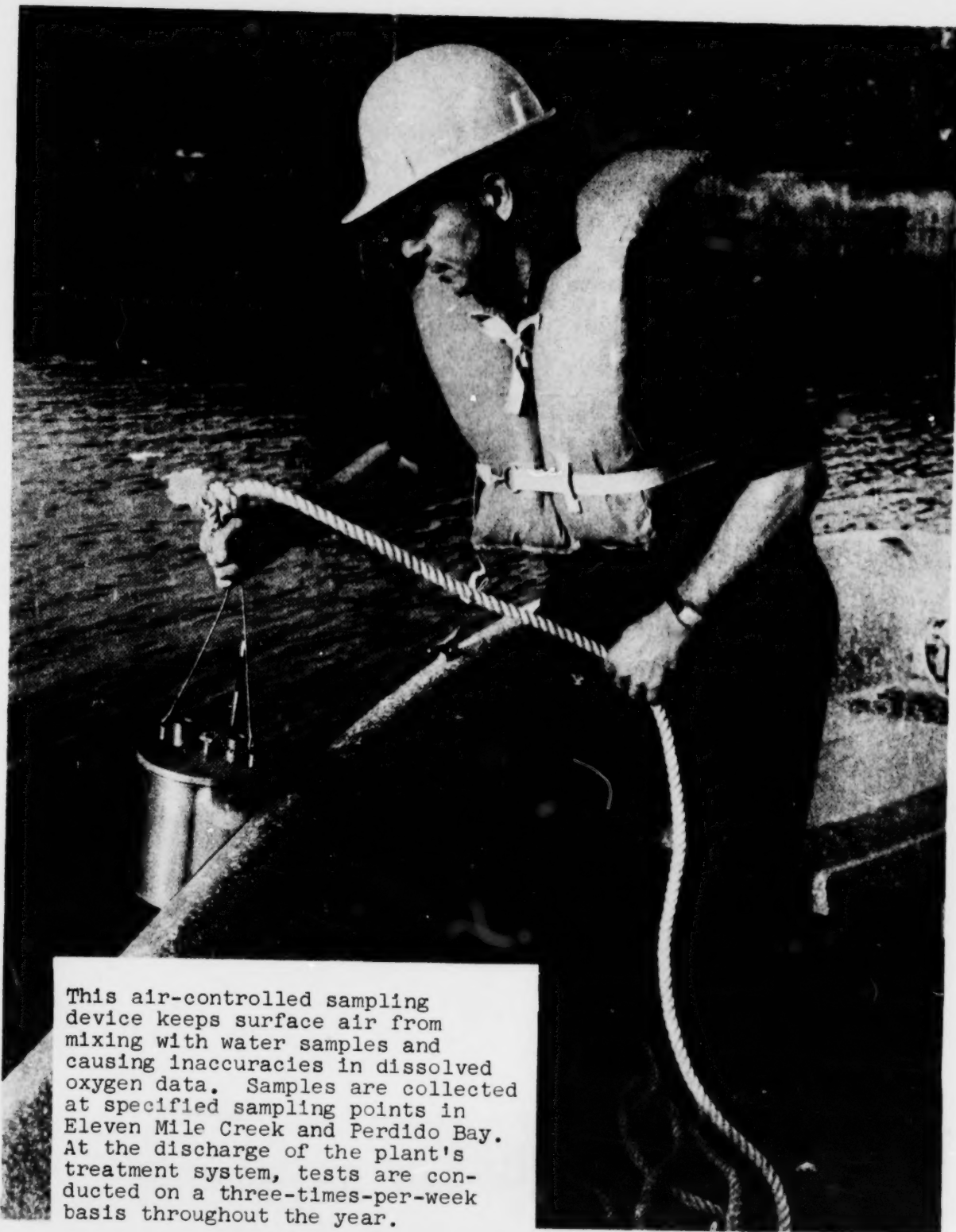


This hydraulic dredge was installed in the company's existing primary settling basins which are used alternately. When the new system is completed, this dredge will be moved to the new basin where it will provide continuous daily mechanical removal of sediments to nearby spoil areas.



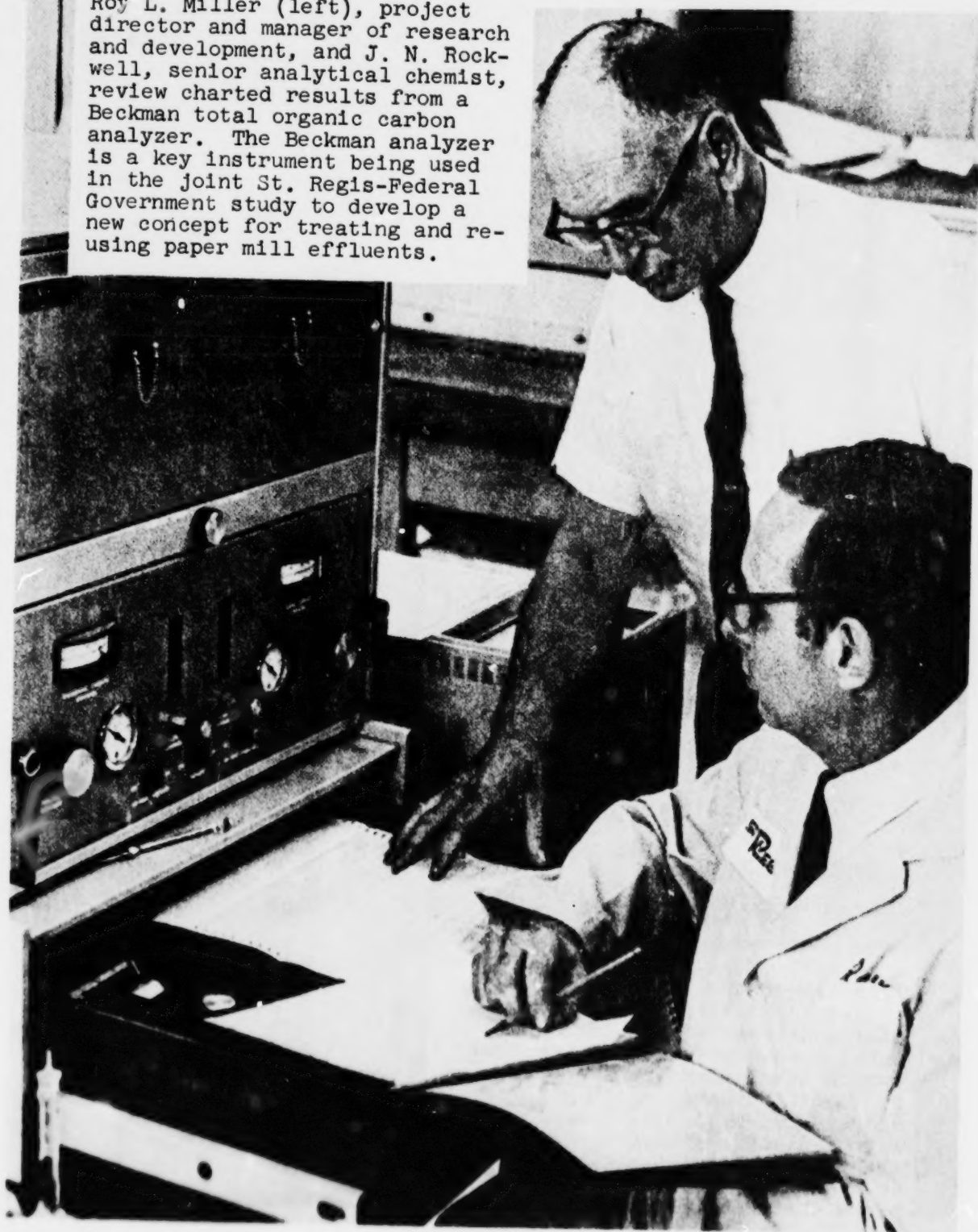
St. Regis laboratory technicians are shown checking a water sample taken at the mouth of Eleven Mile Creek for dissolved oxygen content. Samples must be checked for oxygen analyses immediately to assure accuracy. Samples are then taken to the company's Pensacola laboratories for numerous other tests. These tests are conducted each month throughout the year. In addition, the company spot checks frequently to measure any variation.





This air-controlled sampling device keeps surface air from mixing with water samples and causing inaccuracies in dissolved oxygen data. Samples are collected at specified sampling points in Eleven Mile Creek and Perdido Bay. At the discharge of the plant's treatment system, tests are conducted on a three-times-per-week basis throughout the year.

Roy L. Miller (left), project director and manager of research and development, and J. N. Rockwell, senior analytical chemist, review charted results from a Beckman total organic carbon analyzer. The Beckman analyzer is a key instrument being used in the joint St. Regis-Federal Government study to develop a new concept for treating and re-using paper mill effluents.



This effluent sample is being injected into a gas chromatograph by a syringe, which punctures a rubber diaphragm to enter the instrument. The gas chromatograph separates mixtures of differing substances for separate analysis. The combination of the chromatograph and infrared spectrophotometer helps to identify the components of a given sample.



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MR. MUNSON: Mr. Chairman, we now come to the sixth and final recommendation of this conference, which says:

"All waste abatement facilities shall be in operation not later than December 31, 1972."

I will state again that St. Regis will have its waste abatement facilities in operation before December 31, 1971. Our company goal for completion is October 31 of this year, or about eight months from today. The primary basin is scheduled for completion in May.

Mr. Chairman and conferees, that concludes my statement. In behalf of St. Regis Paper Company, we appreciate the opportunity to make this presentation to you.

We further request that the record be kept open for 30 days should we wish to supplement our presentation.

Thank you.

MR. WHITE: Thank you very much, Mr. Munson. Would it be possible to limit this to 15 days? Would that impose too much of a--

MR. MUNSON: If that is what is your practice.

MR. WHITE: This is what we did previously. If there is no undue hardship, we will leave it open for 15 days to allow you to submit anything.

MR. MUNSON: Thank you.

MR. WHITE: I am sure we have a number of questions

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and/or comments here.

MR. PATTON: Mr. White.

MR. WHITE: Yes, Mr. Patton.

MR. PATTON: Mr. Munson, you indicated in your presentation that you had installed aerator capacity over and above that in the design which was submitted to us and approved by our agency. What is your expectation in review of this of what the final discharged BOD will be when this plant is placed in operation and stabilized?

MR. MUNSON: Mr. Patton, we are really doing this as a matter of insurance--

MR. PATTON: I realize that.

MR. MUNSON: --to meet the 8,800 pounds. As I am sure you are aware, on occasion aerators fail and predicted effluent loading is a little bit difficult to be completely accurate about. We felt that for these two reasons we should put in a little extra aeration capacity.

MR. PATTON: One of the reasons for my question, Mr. Munson, you indicated in-plant reductions had reduced the raw waste load, and I wondered if you had calculated what you would expect to produce?

MR. MUNSON: We have made no calculations on the basis of the load as reduced by some 5,000 pounds per day. I stated that by historical data I meant the data that was on hand at

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that time, and we did not consider reductions that have taken place since. This hopefully gives us some additional margin.

MR. PATTON: What have you done as far as sanitary wastes from the mill?

MR. MUNSON: Sanitary wastes, to the best of my knowledge, are handled by septic tanks.

MR. PATTON: None of this goes into this system?

MR. MUNSON: To my knowledge it does not.

MR. PATTON: Thank you.

MR. WHITE: Any other comments or questions?

Dr. Myers.

DR. MYERS: Earlier today we heard a statement about this 8,800 pounds of the 5-day BOD, and the recommendation was that this go down to 5,100 pounds per day. I gathered from your statement that you are still just trying to meet the 8,800 pounds per day, and I just wonder if it wouldn't be possible for you to meet this 5,100 pounds that is recommended by the Federal agency?

MR. MUNSON: Well, Dr. Myers, this is a new development that we have only learned of in the past few days, and without some study review I don't feel that I should comment on it at this time. We simply haven't had a chance to see what this will do.

DR. MYERS: Mr. Chairman, I think that there are some

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other technical questions that it probably would be best to raise in our executive session about the process and some of the proposals, but I think we can handle that in our session.

MR. WHITE: Yes, I believe we might be able to do that, Dr. Myers, in a better fashion during this session.

Mr. Traina? Go ahead, Mr. Traina.

MR. TRAINA: I concede to Mr. Reed.

MR. REED: Mr. Munson, you raised a little flag with me on the response that you gave to the foaming problem, which is of genuine concern to the residents of Alabama and Florida. I wonder if you would wish to go on the record giving us your thoughts on where the additional foaming material is coming from?

MR. MUNSON: Well, as I stated, foam is one of the industry problems that occurs in all pulping effluents. Now, where the foaming constituents come from is not thoroughly understood. We do think that secondary treatment we plan to provide will reduce the foaming potential some 50 percent. Now, if the foaming potential is reduced this much, this is the same thing as saying that the dilution is double what it is now and the best cure at the moment in open waters is dilution will result in reducing the diluted foaming potential where it will become a substantially lesser problem.

MR. REED: In last year's report, in testimony by Mr.

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Fales, he made it quite clear that at that time the technical people from St. Regis, quote, could not find chemical elements in the samples in sufficient quantity to identify the foam as kraft mill wastes, unquote. And we seem to have resolved at least 50 percent of it now. (Laughter.)

MR. MUNSON: No, these are two unrelated statements. I am saying that the secondary treatment should reduce the foaming potential of the effluent by some on the order of 50 percent.

Now, I believe Mr. Fales related to the rather skimpy foam samples that we were able to obtain and send to our West Nyack laboratory.

MR. REED: Well, you should have had an opportunity in the past year to improve your collection ability from the testimony from the Alabama citizens. (Applause.)

I think unless St. Regis fully understands that this is one of the major points of this conference, we are just spinning wheels. The Alabama residents and the residents on the Florida side of the bay have made it very clear that one of their principal objections is the vast quantities of foam that blow ashore that are emanating from some point in Perdido Bay or its tributaries, and I don't think we can leave this room without taking this thing on nose to nose. I think it is up to the St. Regis Company to be cleaner than Caesar's wife and you

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are going to have to prove to the people in Alabama and to the regulatory agency in Florida that you are making a maximum effort to reduce all foaming ingredients from your plant. I don't know whether 50 percent is going to do it.

MR. MUNSON: We believe that the 50 percent reduction is attributable to the secondary treatment system. As I think we have noted, we have been working on in-plant changes and we hope to reduce the foaming potential to a greater degree through this route. We fully understand the foaming problem and the irritation that it has created.

MR. REED: All right, let me go on now, from a layman's standpoint.

I think the presentation by Mr. Little this morning makes it clear that the in-house changes at the St. Regis plant are not satisfactory to the Federal Water Quality Administration nor to the State of Florida. I think we have to have assurance by the St. Regis Company today that further in-house changes and housekeeping procedures are going to be looked on with an accelerated progress report due the conferees, because if we are that far above the southern States average, something is wrong in this plant. Would you agree with that?

MR. MUNSON: Not necessarily. (Laughter.) Every pulp mill is different. The nature of the effluent from every pulp mill is different and an average spread over a number of

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mills is not necessarily--

MR. REED: I don't like averages either, I agree with that. I don't like averages, but they are indicative of problems. I don't like averages because fish die on high averages or low averages, and the quality of the water in Perdido Bay is the final proof of the pudding.

But I suggest to you, sir, that I don't think the conferees are going to leave this point easily, and I suggest to you that the St. Regis Company better pay strict attention to the recommendations coming out of this meeting, because I am sure they are going to encompass remarks on in-house house-keeping, which I think you ought to take seriously and implement an immediate schedule for collecting some of the loads that are coming out of this plant which are above averages.

And as I have said, I don't like the averages, but let's get going on that. I don't think we can avoid this conclusion.

MR. PATTON: Excuse me, Mr. Reed, let me ask this specific question.

Do you have a tall oil recovery system?

MR. MUNSON: Yes, we do. I am not thoroughly familiar with this mill because I am concerned with all our mills.

That is right, is it not, Mr. Munson?

MR. PATTON: This might be a specific point of

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investigation. I think you would agree that tall oil is something that will tend to cause a great deal of foam.

MR. MUNSON: We have been improving the efficiency of the tall oil--

MR. REED: Mr. Munson, I recognize that you are in charge of engineering for all the St. Regis mills, but we are responsible for the byproduct of the St. Regis mill from the State of Florida and so I am going to ask you, as the State representative, to give this mill in particular maximum attention by yourself in consultation with the representatives of the St. Regis Company locally. But I think we need more time from the chief of staff, which you are, to get this operation cleaned up.

MR. WHITE: Any other questions or comments?

Dr. Myers.

DR. MYERS: Mr. Chairman, I wanted to ask, I am not entirely convinced that the company understands where their foaming problem arises. Have we identified really where it is coming from?

MR. MUNSON: Well, with this new recommendation that is proposed there is no question that we are going to have to conduct further testing to try to identify the exact source of foam within the mill. As I say, the nature of the foam is not thoroughly understood.

DR. MYERS: Well, along in this same vein, I know

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that the people in Alabama are not going to be content with just having the foam half as deep; that isn't satisfactory. (Applause) So whatever it takes to solve this problem, that is one of the chief complaints from the people in Alabama is having this particularly obnoxious problem. They feel that there should be some solution to it and I am sure that you would agree that it can be found and must be found.

MR. MUNSON: I might add that reducing the foam potential by 50 percent may result in a very much greater reduction in actual foam generated. It even could be to the point where you are down past the critical level and there will be little or no foam. We simply don't know this.

DR. MYERS: It looks like we might have to have some further effort, then, in order to solve this problem. I am still very much concerned about this issue.

MR. REED: Dr. Myers, I agree with your concern.

MR. WHITE: Mr. Traina.

MR. TRAINA: Thank you, Mr. White.

First let me just say that I think it is encouraging that St. Regis has now identified the foam as perhaps a major cause of the foam in the bay. If you recall, last year there was some question about that when we made our Federal presentation.

Mr. Munson, I think I would like to separate two areas

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that we have discussed or you folks have discussed today. The first is the immediate situation with regard to the mill and the provision of secondary treatment that you say will be, I guess, operational by October 1st. Now, the expected waste load, as I understand your statement, from that is going to be 8,800 pounds a day BOD, that is correct.

MR. MUNSON: That is the design basis.

MR. TRAINA: As you know, the Federal report made this morning indicates that because of the problems within the plant that you generate an excessive amount of BOD and that that load should be 5,500 pounds a day. What in the plant can be done? You have already reduced the load, I understand from reading your report, by 5,000 pounds. Surely there is something that can be done within the plant to get that generated lower down so that we can meet a 5,500 pound a day at the end of that effluent line. Fifty-one hundred, excuse me, sir.

MR. MUNSON: Well, as I mentioned a moment ago, this new proposed recommendation we have only been aware of for the last few days, and at this time, without more time to digest the thing, I would not like to comment on it.

MR. TRAINA: Could we get a response to that within the 15-day period? I think this is at the heart of the matter as regards this next year's program.

MR. MUNSON: Yes, we can make some further response

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within 15 days.

MR. TRAINA: Fine. With regard to the question of foam, here again, and you fellows have the expertise here, you indicate that 50 percent of the foam would be reduced, you figure, by secondary treatment. Now, here again I am sure, and we have been through the plant and we have had our people through, that there are areas in the plant in the process that can be controlled to reduce the generation of foam and not necessarily treatment, I am talking about the generation of foam. Now, has this been addressed to within the plant?

MR. MUNSON: I think we are talking about, the term I used was foaming potential. If this material having a high foaming potential is mixed and diluted to the point where it still has some foaming potential, there is no foam unless something, either wind or motorboats, churn up the water and generate foam because the foaming potential is there.

MR. TRAINA: What I am getting at, sir, is within the process aren't there places within the process that the foaming potential ingredients can be controlled so that they don't get out into the bay?

MR. MUNSON: Well, this is what we are going to have to study and we may have further information for you at the time within the 15-day time for response.

MR. TRAINA: To reiterate what has been said by the

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State people here, I think this is of crucial importance and I would hope, there has been a year already that has gone by, I would hope that we can now address this problem of foam, generation of foam. Just the generation, I am not necessarily talking about the treatment of it. But where in the process is it coming from and how can you control it on the site, on the spot?

I would like to perhaps, then, switch, Mr. White, to some comments to Mr. Lang with regard to the second part of his presentation.

MR. WHITE: Let's finish with Mr. Munson first.

Mr. Munson, I certainly am not a paper mill waste expert or anything approaching it, but I did tour the St. Regis plant a few months back with some members of the local staff and some members of our technical staff from Atlanta and from Corvallis, Oregon, and I can say from personal observations I think there are many steps that can be taken immediately to cut down some of this waste that is being discharged. This mill, the older section of the mill, is leaking from every pore. This black liquor is just running down and out and into your treatment facility, and it would appear to me that this is something that you could address immediate attention to and start improvements in cleaning this up, say, within 30 days. I think you will admit, and I noticed upon touring the mill,

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that there are many things that seem to be in a very poor state of repair.

MR. MUNSON: Well, if there are obvious remedies that we can implement promptly, we will do so.

MR. WHITE: I mean this would be just a portion of it. And it is my understanding again as a layman that you might not have sufficient furnace capacity to cook out the black liquors that you are producing there and consequently reducing some of these ligneous acids that are being discharged. I would certainly recommend that you consider this aspect of it in your report to us, that is if your mill capacity is too great for your furnace capacity, that is your mill production capacity.

Are there any other comments?

MR. REED: I have one comment, Mr. White. July 1st the Corps of Engineers are going to have to permit this plant. I think that is a very significant date that the St. Regis Company had better be very cognizant of.

MR. MUNSON: We are.

DR. MYERS: Mr. Chairman, I think that his term might have been in error. They might not.

MR. REED: Right. That is why I wanted Mr. Davis to still be in this room.

MR. WHITE: Let me make a brief statement concerning this.

H. J. Munson

Of course the permitting program is in its infancy and hopefully will be implemented very soon. There are many problems to be worked out and I don't think that we are at the point that the permitting program is going to immediately preempt what we are doing here. I think we are going to have to do this and then this permitting program, in all likelihood, in the case of St. Regis will impose additional requirements, because the program is being developed under the philosophy that all mills will be considered throughout, each in-house process will be analyzed and credits or debits entered against the mill. Again this is premature and I don't want to get into that, but this is just one of the problems that is coming about.

I think in this particular case we are just going to have to stick with the program that we have outlined and that we will reiterate and revise today.

Thank you very much, Mr. Munson.

MR. MUNSON: Thank you.

MR. TRAINA: Mr. Munson, I really would like to get into this other aspect of it and I won't get into details, but let me ask one question that perhaps you can answer and this is regarding Mr. Lang's presentation on the research. Has a decision been made to apply results of this research to the Pensacola mill? I know you have decided not to put the pilot plant in here. Has the company arrived at a decision to put

H. J. Munson

the entire system here when it becomes feasible at this mill?

MR. MUNSON: It depends entirely upon the results of the pilot plant studies. As I am sure you are all aware, many research programs end up in a blind alley and are wholly unsuccessful. If this program is as successful as we hope it will be, I am sure we will give very serious consideration to applying it not only in Pensacola but at other sources. Actual results will probably be somewhere between the hoped-for results and no results at all, but this is a research and development program, and we have no way of knowing whether we will come up with a feasible system or not at this time.

MR. TRAINA: The comments made by Mr. Lang indicate that the results today are very promising and I am very encouraged about that. I think, frankly, I would just like to just reiterate something I said earlier, is that I think the ultimate solution to the problem of St. Regis is closely associated with a closed system at the plant.

MR. WHITE: Well, one last remark with respect to this little dissertation we had on effluent standards that we have established or will establish.

These are no panacea, and after you have accomplished this, I think we will be forced to consider the water quality of the receiving waters and make analysis when you do have this treatment in effect, and it may be necessary for us to come back

H. J. Munson

with much more stringent requirements.

MR. MUNSON: Well, I understand that the object of the game is the water quality standards. That is the end result we are all looking for.

MR. WHITE: That is the object, yes. And I just wanted to say, unless we lose sight of this, that once we get this treatment in that we are referring to--of course Mr. Traina alluded to this in the closed system--but again we will be particularly looking at the effects your treatment processes have on improving the quality of the water, and if these aren't enough it may well be necessary to impose more stringent requirements.

MR. REED: I have one last question.

MR. WHITE: Yes, Mr. Reed.

MR. REED: Through the corporate structure where do you report? Do you report to the corporate headquarters in New York City?

MR. MUNSON: I report to the Chief Engineer of the company, who is also in Jacksonville.

MR. REED: In Jacksonville. Well, I hope you will take to him in person the results of this conference and explain to him that we are at a point now where we are not backing down, and I think it is a time that the St. Regis Company has got to pull itself up by its boot straps and make a major effort at

H. J. Munson

this mill to protect the water and enhance the water quality of Perdido Bay. I think that is as succinct as I wish to make it.

MR. WHITE: I believe Dr. Myers has another question.

DR. MYERS: I wanted to ask you if this is the only plant of St. Regis at which a research program of this type is being carried on or is a similar study being carried on anywhere else for this study that Mr. Lang reported on?

MR. MUNSON: No, this study to find a specific answer is being carried on only at this mill as far as St. Regis Paper Company is concerned. Other people are working on the same problem in slightly different ways in different areas. Somebody no doubt will find a breakthrough.

MR. WHITE: Any other comments?

Well, Mr. Munson, in closing with your presentation, I would just like to say that we are looking forward to receiving your comments in the 15-day time period that we established for responding to our report.

MR. MUNSON: Thank you.

MR. WHITE: Thank you very much.

With that--excuse me just a minute.

(Off the record.)

MR. WHITE: Back on the record.

We will now return to the format that I set out previously and call on Dr. Myers to continue with the Alabama

W. J. Baxley

presentation.

DR. MYERS: I would like at this time to call on the Honorable Bill Baxley, the Attorney General for the State of Alabama.

Bill, we are delighted to have you here today and we appreciate your taking time to come down here and appear.

WILLIAM J. BAXLEY

ATTORNEY GENERAL, STATE OF ALABAMA

MONTGOMERY, ALABAMA

MR. BAXLEY: Thank you, Dr. Myers.

Mr. Chairman, I appreciate very much the opportunity to really state my personal views and the policy of the Alabama Attorney General's Office in this matter and on all pollution matters during the next four years. I may be a little out of order here, but that is just the way I am made, and I think as far as St. Regis is concerned, and nothing personal involved, I think the time for conferences and the time for hearings is over.

I think it has really been too long already since 1969 and I don't think St. Regis is exercising a responsibility. I don't think they are trying to be reasonable and they are not coming in with a cooperative attitude, in my opinion. As I understand it, last year St. Regis was saying that they weren't even sure the foam came from their plant, which was obvious to

W. J. Baxley

any busboy in any restaurant around this area that that is where it came from. And then just a while ago to say that some of the foam or part of the foam could be generated by the wind and the motorboats, I don't think that evidences a reasonable position on the part of the company.

I just want to say that from my personal point of view, and it is strictly personal, if any of these landowners, property owners around Perdido Bay, if they took the waste out of their house, out of their kitchens or their sewage and piled it out in the street in front of their house, that it would be only a matter of hours before some neighbors would either have them under an injunction or have them in jail. I don't mean jail in that term, but I don't think that Perdido Bay and the other waterways of our region and our country are any less public thoroughfares than that street that might run in front of those peoples' houses. I don't think you have any right to put any type pollution in these public thoroughfares.

And the attitude of our office is going to be that we are right now looking into ways to see what standing we would have to go into court against St. Regis and other companies. We are not bound by any timetable. We are not bound by the timetable these gentlemen have set and we are not bound by a Federal timetable. We want to be reasonable if you are reasonable, but we have people looking in right now under the common law

W. J. Baxley

nuisance doctrine to see what standing we may have to go to court. I don't care about you carrying it to your chief engineer. I want you to carry it up to New York where the Board of Directors sit and tell them that we are preparing now the research that is the first step towards filing suit against some of these blatant polluters that are tearing up our streams and ruining our marine life and our recreation area here.

As I say, it is not personal. I think the people down here in this plant and the plants in Alabama that are polluting Escambia Bay and other plants in this area, I think that they want to clean up and they want to institute these things. I may be naive, but I know that it can be done because it has been done with new plants.

I think the reason that it is not being done is because these Boards of Directors that sit up there in New York at the corporate office, when your people down here go up to them and say, "Now, we need to install such-and-such an equipment at such-and-such a cost to not cut down the pollution but to stop the pollution," and they say, "Well, how much does it cost?" And you tell them how much it costs to install it and then their next question is, "Have we been made to yet?" And you say, "Well, no, we haven't been made to." They say, "Well, don't do it because it will cut down on dividends this

W. J. Baxley

year."

I just want to tell you, that is my personal opinion as to why it has drug out this long. And if you go back, you can tell them that the Attorney General of Alabama said that he was going to see if he could change the last part of that where when you go back the next time you will say, "Yes, we are being made to." And the timetable, as far as I am concerned, ends right now.

Thank you very much. (Applause.)

MR. WHITE: Thank you very much, Mr. Baxley.

MR. BAXLEY: One other thing. I am very impressed with the questions this panel has asked, and I want to say this is not necessarily just to apply to our standing in court on the St. Regis matter which is in Florida. But if there is a plant in the State of Alabama that is responsible for pollution that is affecting the marine life of the citizens of Florida, then we will be happy to file the same type proceedings against the Alabama plant, because it is a matter that affects our entire region, and we want the people in Florida to know that we are just as willing to protect the Florida residents as we are the Alabama residents.

Thank you.

MR. WHITE: Thank you, Mr. Baxley. Would you stand at the podium just a minute, please, sir.

W. J. Baxley

Are there any comments?

MR. REED: General, I am very appreciative of your appearance and your outspoken remarks. Delighted to have you here. And we can use your assistance in seeing that this plant conforms to the standards which we wish to get the Perdido Bay into.

There is plenty of work in both of our States. We have been long all too quiet, and we all know that we have got problems on the Warrior, Mobile Bay, Pensacola Bay, and other bays. I think with your cooperation and the cooperation of our bright and energetic new Attorney General in our State we are going to see rapid progress.

MR. BAXLEY: Thank you very much.

Thank you, Dr. Myers.

MR. WHITE: Any other comments?

Thank you very much for being here and making this presentation.

MR. BAXLEY: Thank you. (Applause.)

DR. MYERS: Mr. Edgar W. Stuart, Perdido Basin Anti-Pollution Committee.

E. W. Stuart

EDGAR W. STUART

PERDIDO BASIN ANTI-POLLUTION COMMITTEE

MONTGOMERY, ALABAMA

MR. STUART: Gentlemen of the conference, ladies and gentlemen.

My name is Edgar W. Stuart of Montgomery, Alabama, and Perdido Beach, Alabama. I have been going to Perdido ever since I was born. My family first started down there over 60 years ago. We own property down there. And frankly, we thoroughly enjoy coming the short distance of 200 miles down to be in this wonderful area.

I think it is a shame that this generation is exploiting God's given natural resources to make a fast buck and leave a bunch of filth for all of those young people that we have had around here. This makes you mad. I hate to get mad, but this is what we are doing.

Now, how quick are we going to do something about it regardless of deadlines that the Attorney General mentioned? And thank goodness we had him represented here today by himself and not by any other representative. And I think he means business.

And our little group means business. I just said I don't want to get mad, but sometimes you have got to get mad to get something done, even if it takes the courts, although I don't like

E. W. Stuart

to settle things in courts. This is our problem, is what I am trying to say, and let's do something about it.

Yesterday a gentlemen speaker at a meeting in Montgomery pointed out that the word "economy" and "ecology" are from the same Greek word. Well, this is some connection here. We need both. I have been working through various organizations, the Chamber of Commerce especially in Montgomery for industry, and I believe in it, but I also believe that it must clear up its mess. I am not a fence straddler, but I am just as strong for ecology as I am for industry. So how are we going to put the two together is what we have got to do and do it in a hurry. We are wasting a lot of time.

If we find that something is going on now that we hadn't recognized before, something should be done about it immediately by both sides. We should join together and learn how to do it with all the modern day knowledge that we have. I think that if people are subject to being killed or diseased down in Florida by dredging that canal, we do not want to take that risk of diseasing young people and older people and killing people through the water or other methods that these different groups say that this canal will cause. Of course, we have spent \$50 million on it, but it would be best to lose that rather than kill off people. So if we find something that is wrong, I think we ought to do something about it, even if it costs us

E. W. Stuart

some money.

I do feel like that St. Regis has an interest in this problem; it is certainly obvious that they should have. I told Mr. Fales, the former manager, that I thought they should be just as interested in it as we are, so why can't we, instead of taking sides and fighting each other and cussing each other out and all that, join together on this problem and do something about it right now.

I have the same objections that I had last year. I won't repeat those; they are in the record, the color and foam and the trash, and so forth. But I would like to bring up something about any new plants that come in. Are we going to charge them with strict regulations or any new subdivision or anything of that type?

Another question I have is, was St. Regis advised about this checking the 72-hour check that was made and were they on their best behavior at that time or did you all go in cold and make a test?

Could I--

MR. WHITE: I will ask Mr. Traina to respond to that.

MR. TRAINA: We worked with the St. Regis personnel in that 72-hour survey, sir. We feel it is, as I indicated earlier, representative of what that plant discharges. And I might add that based on those results, we come up with a lower

E. W. Stuart

BOD loading than we had initially proposed a year ago.

To answer your question, yes, sir, we worked with the St. Regis personnel on that.

MR. WHITE: I would observe also that this is St. Regis property where these treatment facilities are and where we had to do much of our testing, and consequently it was necessary that we contact the officials before going into the property to sample.

MR. REED: I think also you want to point out that it is very difficult in a large industrial site such as this to play games when inspectors are on the grounds. It is exceedingly difficult to do that, to run a better effluent while testers are there. These are gigantic facilities which are not easy to change the productivity of the waste out of it. You can get very representative samples by being there with the cooperation of the company, and I think you will find that generally in a large plant the effluent standards remain identical 24 hours around the clock unless something chaotic occurs.

MR. STUART: I am very glad to know that. We, of course, are laymen and we do not realize some of these questions may sound a little bit ridiculous, but we are grabbing at every straw and we are very much disturbed.

The last and final point I would like to make is

E. W. Stuart

that unfortunately we seem to get involved in politics. There are sometimes handouts and under-the-table transactions that we know nothing about. I may be standing up here beating my gums and not realize that St. Regis has a whole lot more power behind them than I have just representing myself as an individual and a small group.

And I hope, as I said last year, that the news media will be fair about this thing; that they won't cover up anything because of some pressure from big industry, any industry, that is; and I know there are other pollutants besides St. Regis Paper Company, but I would charge the news media to be clear, positive with what they report, and not to hide anything.

That is my statement.

MR. REED: I will respond to that right away.

I have served as the Chairman of the Department of Air & Water Pollution Control for two and a half years for two administrations, sir, and I can categorically state, looking you in the eye, with a hand on an available Bible, that no Governor and no publicly-elected officer or any other officer of any corporation has ever made an effort or has ever succeeded in an effort of getting to me or any other member of our Department, and I mean that.

MR. STUART: That is very good, sir. It was not--

E. W. Stuart

MR. REED: I just wanted to clarify it. I think that the general public--

MR. STUART: That is a wonderful statement and I appreciate it.

MR. REED: I think that the general public finds fault with the bureaucracy and immediately concludes, as I did when I was out of government, that there is a lot of hanky panky. When you are in government you find out that there is very little hanky panky, but there are very great immovable objects which need to be moved and take more time than some of us--and I am just as restless as you are, sir, but they take more time sometimes than one first thought of.

MR. STUART: The main people that I was charging were the news media.

MR. REED: I think they have been particularly aggressive, especially in the Pensacola area. (Applause.)

MR. STUART: Very good. That concludes my statement.

MR. WHITE: Thank you very much, Mr. Stuart.

Are there any other comments, gentlemen?

If not, Dr. Myers.

DR. MYERS: Thank you, sir.

Miss JoAnn Allen of Lillian, Alabama.

While you are coming, who is responsible for getting us our refreshments?

Mrs. J. Allen

FROM THE AUDIENCE: Tommy Thompson.

MR. REED: Thank you, Tommy Thompson.

DR. MYERS: We want to thank you. That is most thoughtful.

MRS. JO ANN ALLEN

STAR ROUTE, BOX 605

LILLIAN, ALABAMA

MRS. ALLEN: I am Jo Ann Allen, Star Route, Box 605, Lillian, Alabama.

I do have a prepared statement, but I feel what I would say would be irrelevant after what has taken place here this morning. I would like to bring out some points in my speech. I would like to ask that it be put in its entirety into the record of this hearing.

MR. WHITE: Without objection, it will be entered into the record as if read, Mrs. Allen.

MRS. ALLEN: Thank you, Mr. White.

(The statement referred to follows:)

Environmental Protection Agency
Pensacola Municipal Auditorium
Pensacola, Florida
February 25, 1971

Mr. Chairman:

I am Jo Ann Allen, Star Route Box 605, Lillian, Alabama.

I spoke before the first session of this Conference in January 1970. At that time, I presented the signatures of over a thousand very concerned residents and citizens of the Perdido Bay area. The statement on these petitions was as follows:

Whereas, the undersigned owners and the undersigned residents of property in the Perdido River Basin are seriously concerned with the problem of present and potential pollution of said Perdido River Basin and Perdido Bay area; and,

Whereas, there exists probable cause to believe said Bay is presently being polluted and contaminated by the use of various Industrial and Municipal interests; and,

Whereas, the undersigned owners and undersigned residents have knowledge that consideration is presently being given to the establishment of and maintenance of additional waste disposal facilities which will use said Perdido River Basin and Perdido Bay area for the disposal of effluent;

Now therefore, the undersigned respectfully request the assistance of Florida, Alabama and Federal pollution control agencies to intervene in taking preventive measure towards the present and future pollution of the Perdido River Basin.

Today, I am before this Conference with Many Regrets! I regret that over a thousand signatures, which took many hours and days to secure, were apparently to no avail in getting action in solving or stopping the pollution of the Perdido River Basin.

I regret I feel the urgency to spend My Time to be back before this Conference.

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Mr. Chairman:

I regret that I, as a resident and taxpayer of the State of Alabama, have the feeling that what it takes to stop pollution, is to be fortunate enough to be able to have an eloquent Lobbyist represent me at Conferences such as this. As a lay citizen, I am NOT that fortunate!

The past 13 months were spent with much pussyfooting, foot dragging, buck passing, and you scratch my back--I'll scratch yours, TACTICS. You name it, it was there! And I personally experienced each of these. The shoe will fit many of you here today, and to those FEW of you, whom it does NOT--I wish to say "Thank You" for your continued concern and efforts!

Mr. Chairman:

I regret, that to my knowledge, approximately 9 Billion, 855 Million gallons of untreated, or partially treated waste, from one industry alone, have been allowed to be dumped, since the first session of this conference, into the tributaries of the Interstate Waters of Perdido Bay. I also regret the many thousands or millions of gallons, from ALL other sources, which have been allowed to be dumped in Perdido Bay or its tributaries, in the past 13 months. One could say--That's a lot of waste water which has passed over the DAM since we last met! I would like to repeat what I have said many times before, I am concerned with the Pollution from ALL sources, which pollute the Interstate Waters of Perdido Bay. I include the Escambia County fill, on Eleven Mile Creek, and I ask, how many gallons of septic tank wastes are being dumped at this fill each week? I include the apparent pollution which comes from Rock Creek, a tributary of Black Water River, and Hollinger Creek, a tributary of the Styx River, both on the Alabama

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side of Perdido Bay.

Mr. Chairman:

I could NOT participate in this Conference, without including the following; A year ago, I never would have guessed that the problem of Seismic studies from oil companies, or other sources, would have twice been allowed, or permitted, to be as far up Perdido Bay as Lillian Bridge! I personally know this happened in May and August of 1970. I state again, I am ADMANTLY opposed to any Seismic testing, or oil drilling, by ANYONE, in the State owned bay bottoms of Perdido Bay and its tributaries. I am also opposed to the drilling of the Bay bottoms from land. I respectfully request that ALL permits for Seismic tests, or for drilling, be revoked IMMEDIATELY. This includes the permit for Wolf Bay, issued by the State of Alabama, and all permits issued by the State of Florida.

Mr. Chairman:

I ask the conferees of this Conference--Has any consideration been given, as to just what effect the almost daily Air Pollution Smog over Perdido Bay, has had in increasing the polluted conditions of Perdido Bay? This odoriferous Air Pollution affects me almost daily, and I cannot but wonder what effect it may have in polluting the waters of Perdido Bay.

I know there are some of you here who do not believe or approve of the use of NO SWIMMING signs. But I feel there must be some agency--Local, State, or Federal, which does have the authority to tell the Public which areas, if any, in Perdido Bay, are safe for body contact sports. I challenge those in authority to make public this information IMMEDIATELY.

I ask that the attached pictures of the continued horrible pollution on the Alabama side of Perdido Bay, be placed in the record of

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this Conference. These pictures were recently taken by me, in front of my home.

I respectfully ask that I be given 15 days in which to place a final statement in the record of this hearing. I also request, that ALL rules of this Conference be abided by, and that ALL statements, by all citizens, under the rules of this Conference, be included in the record of this Conference.

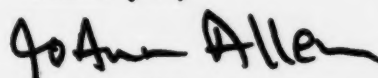
Mr. Chairman:

I do NOT ask the impossible, but as a citizen of the State of Alabama, I ask the Environmental Protection Agency to recognize the fact that I do have the Constitutional Right to seek and secure a Clean Environment, and because of the pollution of the Interstate waters of Perdido Bay, I do NOT have this Clean Environment. I ask for immediate relief from this problem.

What I have said is factual, and it has NOT been my intention--to just CONDEMN, but these are my conclusions from almost five years of effort, to receive relief from the pollution problems of the Perdido River Basin.

I wish to say "Thank You" to Dr. Myers, and the Environmental Protection Agency, for having made possible this conference.

Thank you,


Jo Ann Allen

Mrs. J. Allen

MRS. ALLEN: I would like to thank very, very much the Attorney General of the State of Alabama for having come and given such a strong presentation in our behalf. This is encouraging.

I would like to thank the Department of Conservation of the State of Alabama and the Fisheries Division for their strong stand. I feel we have made progress in that direction from those agencies.

I do feel very concerned over what has taken place here this morning after having been here last year. If only the discussion that has taken place here this morning could have taken place a year ago we would have been one year ahead of schedule. I am sorry, very sorry, the industries involved, the citizens involved took one solid year to come to the conclusion which we could have reached a year ago. And there was enough evidence then that we all could have reached that conclusion a year ago.

Today I am before this conference with many regrets. I regret that over 1,000 signatures which took many hours and days to secure were apparently to no avail in getting action in solving or stopping the pollution of the Perdido River Basin. And I am going to say I regret I feel the urgency to spend my time to be back before this conference.

I regret that I as a resident and taxpayer of the

Mrs. J. Allen

State of Alabama have the feeling, and it was very apparent here this morning, that what it takes to stop pollution is to be fortunate enough to be able to have an eloquent lobbyist to represent me at conferences such as this. As a lay citizen, I am not that fortunate.

The past 13 months were spent with much pussyfooting, foot dragging, buckpassing, and you-scratch-my-back-I'll-scratch-yours tactics. You name it, it was there. And I personally experienced each of these. The shoe will fit many of you here today and to those few of you whom it does not, I wish to thank you for your continued concern and efforts.

Mr. Chairman, I regret that to my knowledge approximately 9,855,000,000 gallons of untreated or partially treated waste from one industry alone has been allowed to be dumped since the first session of this conference into the tributaries of the interstate waters of Perdido Bay. I also regret the many thousands or millions of gallons from all other sources which have been allowed to be dumped in Perdido Bay or its tributaries in the past 13 months. One could say that is a lot of wastewater which has passed over the dam since we last met.

I would like to repeat what I have said many times before. I am concerned with the pollution from all sources which pollute the interstate waters of Perdido Bay. I include

Mrs. J. Allen

the Escambia County fill. I have heard no mention of this at this conference. It has been a concern of mine since I have started working on pollution. I would like to know what the progress is with this problem of pollution from somebody in Escambia County. And I ask, how many gallons of septic tank wastes are being dumped at this fill each week?

I include the apparent pollution which comes from Rock Creek, a tributary of the Blackwater River, and Hollinger Creek, a tributary of the Styx River, both on the Alabama side of the Perdido Bay. And that is directed to the Florida citizens.

I could not participate in this conference without including the following:

A year ago I never would have guessed that the problem of seismic studies from oil companies or other sources would have twice been allowed or permitted to be as far up Perdido Bay as Lillian Bridge. I personally know this happened in May and August of 1970. I state again, I am adamantly opposed to any seismic testing or oil drilling by anyone in the State-owned bay bottoms of Perdido Bay and its tributaries. I am also opposed to the drilling of the bay bottoms from land by any method or pipes or anything. I respectfully request that all permits for seismic tests or for drilling be revoked immediately. This includes a permit for Wolf Bay issued by the

Mrs. J. Allen

State of Alabama and all permits which may have been issued by the State of Florida.

Mr. Chairman, I ask the conferees of this conference, has any consideration been given as to just what effect the almost daily air pollution smog over Perdido Bay has had in increasing the polluted conditions of Perdido Bay? This odoriferous air pollution affects me almost daily, and I cannot but wonder what effect it may have in polluting the waters of Perdido Bay.

I know there are some of you here today who do not believe or approve of the use of "no swimming" signs, and I am not directing that at one person, but I feel there must be some agency, local, State or Federal, which does have the authority to tell the public which areas, if any, in Perdido Bay are safe for body contact sports. I challenge those in authority to make public this information immediately.

I ask that the attached pictures of the continued horrible foam problem on the Alabama side of Perdido Bay be placed in the record of this conference. These pictures were recently taken by me in front of our home.

I would like to further state I have not been one of the residents of the State of Alabama who has only complained of the foam problem. I am a fisherman, or I was a fisherman, and I have not been able to enjoy fishing or eating any seafood

Mrs. J. Allen

out of Perdido Bay since I had tests run on two speckled trout and both were diseased. I have not eaten anything since. I am concerned about the lack of seafood in Perdido Bay, not just the visible foam problem.

I also have a picture which was given to me last night which was taken on February 21 in front of the Roy Johnson home near Manuel Point on Perdido Bay. They could not be here. They asked that I have it placed in the record.

MR. WHITE: Mrs. Allen, may I interject, are these color photographs that you have?

MRS. ALLEN: Hers is. Hers is a Polaroid. Mine are black and white.

MR. WHITE: Will you be able to give us negatives of the pictures?

MRS. ALLEN: Yes, if you want them.

MR. WHITE: Well, we would like to have them. The Polaroid I don't think we will be able to reproduce and put into the record, but the other pictures I think we will be able to.

MRS. ALLEN: Thank you, sir, but I could not refuse to take it. They are as concerned as I and have a lovely home on Perdido Bay.

MR. WHITE: Certainly, if you submit it, it will be in black and white if it will reproduce.

(The above-mentioned snapshots follow.)



Pollution evidence
Johnson's Beach near Manuel Bayou
on Perdido Bay
2/21/71-11:10 AM

By Elizabeth Johnson
Star Route Box 713
Lillian, Alabama, 36549

Soldier Creek-Baldwin County, Alabama, Scott-Allen beach



2/2/71



2/2/71



12/23/70



12/23/70

Mrs. J. Allen

MRS. ALLEN: I respectfully ask that I be given 15 days in which to make a final statement to go into the record of this conference.

I also would like to ask that Mrs. Clyde Little of Robertsdale, Alabama, be given 15 days to have a final statement placed in the record of this hearing. The whole family has the flu and they weren't able to be here. She called me last night.

MR. WHITE: We will be happy to extend this grace period to you and the lady you named for submission.

MRS. ALLEN: Thank you, sir.

I also have with me a letter to go in the record from Paul Schreck, of Paul Schreck & Company, Sailmakers, South Scenic Drive, Lillian, Alabama, 36549.

I would like to read it, Mr. Chairman, if I may.

MR. WHITE: You may.

(The following letter was read by Mrs. Allen:)

PAUL SCHRECK & CO. *Sailmakers***LILLIAN, ALABAMA 36549**

February 25, 1971

U. S. Department of the Interior
Federal Water Pollution Control Administration

Re: Matter of Pollution of the Interstate Waters of Perdido Bay,
and its Tributaries-Florida and Alabama.

Gentlemen:

Because of unfortunate circumstances I am unable to attend the meeting of February 25, and would appreciate it if this letter would go on record as if I were present.

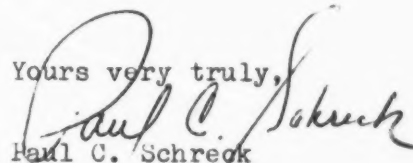
It has already been proven that St. Regis contributes 90% of the filth and pollution in Perdido Bay. In most other bodies of water as large as the Perdido Bay Basin, which can produce billions of fauna there are many contributors to pollution, and therefore very difficult to prove; in this case if we stop one mill the Perdido Basin will at least be on the upgrade.

In the course of this last year I have watched the Bay turn from a nasty brown to an inky black on the ebbside. As you know the average tide in Perdido Bay is about eight inches. It is physically impossible to deposit thirty million gallons a day, three hundred sixty-five days per year, and still expect this bay to exist.

St. Regis must be stopped immediately as the upper part of the bay is already dead, and the lower part will be the same within two years.

Thank you.

Yours very truly,



Paul C. Schreck

PCS:es

Mrs. J. Allen

MRS. ALLEN: I also have with me some type of sample which has in the last two weeks become a problem to the residents north of Lillian Bridge on the Alabama side of Perdido Bay. I was made aware of it about four days ago and when I got here someone had already turned in a sample. This came from Mrs. Black's just above Lillian Bridge. I ask that the Federal Environmental Protection Agency please run tests on this. It is weird looking.

MR. WHITE: Mrs. Allen, may we have a conversation with you after the session to explore this possibility?

MRS. ALLEN: Yes, sir.

MR. WHITE: Fine.

MR. TRAINA: We will be more than happy to look at that.

MRS. ALLEN: Fine. I have never seen anything like it.
(Laughter.)

I do not ask the impossible, but as a citizen of the State of Alabama I ask the Environmental Protection Agency to recognize the fact that I do have the constitutional right to seek and secure a clean environment, and because of the pollution of the interstate waters of Perdido Bay I do not have this clean environment. I ask for immediate relief from this problem. What I have said is factual and it has not been my intention to just condemn, but these are my conclusions from

Mrs. J. Allen

almost five years of effort to receive relief from the pollution problems of the Perdido River Basin.

I wish to say thank you to Dr. Myers and the Environmental Protection Agency for having made possible this conference, and I will have comments in my final statement concerning your report.

Thank you very much.

MR. WHITE: Very good. Well, thank you, Mrs. Allen.

I would like to ask if there are any comments or questions?

MR. REED: I have one question on the seismic testing. I am unaware of any permits outstanding in the State of Florida for seismic testing. We gave up explosives about two years ago, if I remember correctly. Was that what referred you to the State of Florida, Mrs. Allen?

MRS. ALLEN: It has been so difficult for me to get any information--and I must say, Mr. Reed, I have not tried to get it from you--concerning any seismic testing from Florida in Perdido Bay, but since Perdido Bay is an interstate waterway and you own half the bay bottoms and Alabama owns half the bay bottoms, I am very concerned. The only reason I added this to my speech was because of things that came up, discussions that came up last summer when we were trying to get the seismic crews out of Perdido Bay. So I did not know in fact whether

Mrs. J. Allen

you have any. Do you not have any permits current in Perdido Bay?

MR. REED: Not for any use of any explosives.

MRS. ALLEN: I am not talking just about explosives, Mr. Reed. Any and all of the residents will question this whether explosives were used in May or August. The residents feel they were.

MR. REED: Well, now, we have--

MRS. ALLEN: In seismic testing.

MR. REED: We will have to run this back, because if explosives were used on the Florida side, that would be in violation of the rules.

MRS. ALLEN: Sir, one of these oil companies, and whoever was doing the testing, was very careful to see that they stayed on the middle of the bay.

MR. REED: That is it.

MRS. ALLEN: Which was not on the Florida side or the Alabama side, and they would only run over to the Alabama shore when they felt like it was necessary. (Laughter.)

MR. REED: We will try to run that one down.

Thank you, Mrs. Allen.

MR. WHITE: Are there any other commers. s?

MRS. ALLEN: And I want to thank you too, Mr. Reed, for all your help and continued efforts.

Mrs. J. Allen.

MR. REED: Thank you, Mrs. Allen.

MR. WHITE: Thank you very much for your presentation,
Mrs. Allen.

With that we stand recessed for lunch until 2 p.m.

(NOON RECESS)

AFTERNOON SESSIONTHURSDAY, FEBRUARY 25, 1971

MR. WHITE: Let's reconvene, please.

Before getting back to the presentations, I would like to announce that this conference is going a little slower than we initially thought. We had previously scheduled it for one day. We had hoped to complete the presentations, go into executive session, come up with revised conclusions and recommendations and then come back and make these public today. It appears, though, that time is going to prevent us from adhering to this schedule.

So now we will plan to continue with presentations by anyone who wishes to come forward. We will complete those, hopefully not too late this afternoon, go into executive session, and come back in the morning at 9 o'clock to announce our conclusions and recommendations.

I really hope this doesn't inconvenience too many of you. I know it is inconveniencing some of the conferees, but it is just something we really can't plan too well for because we don't know how many people are going to come forward with a statement.

Mr. Reed.

MR. REED: Mr. White, I would just like to tell everybody in the audience, I have to be in south Florida by commitment this evening. I have to catch a late evening plane, but from

H. W. Gamble

the Florida side Mr. Patton will be here for the recommendation meeting tomorrow morning, and we will be in the session this afternoon. The vote of the conferees, I assure you, will be unanimous.

MR. WHITE: Thank you.

Dr. Myers.

DR. MYERS: Mr. Chairman, I would like to call on Mr. Harry W. Gamble, a lawyer, representing the Perdido Bay Anti-Pollution Association.

HARRY W. GAMBLE, LAWYER

PERDIDO BAY ANTI-POLLUTION ASSOCIATION

SELMA, ALABAMA

MR. GAMBLE: Mr. Chairman, conferees, ladies and gentlemen.

My name is Harry Gamble. My wife owns property on Perdido Bay. We have been going down there and living off and on for the past over 35 years.

Over a year ago President Nixon painted a glowing picture of what his Administration was undertaking in the way of preventing further pollution of our Nation's waters. He described the serious conditions already existing, the imminent danger of irreparable destruction of our rivers and bays, and the need for immediate action. It is either now or never, said Mr. Nixon. That was over a year ago. To us on Perdido Bay,

H. W. Gamble

President Nixon's assurances were indeed welcome news because for some time we had been viewing, both with alarm and sadness, not just an accumulation of huge amounts of ugly foam, but the gradual discoloration of the bay waters, the accumulation therein of slime and filth, the disappearance of its marine life.

As most of you know and have been informed today, the Federal Water Pollution Control Commission of the Department of the Interior in September 1969 conducted an investigation of waste sources and made a detailed study of Perdido Bay and its tributaries. The written report of this investigation, published in January 1970, disclosed a dangerous and unlawful contamination of the bay waters, quote, harmful to the welfare and health of the people on the bay. But what was more surprising, the report cited the St. Regis Paper Company, which up to this time had proclaimed its innocence, of being 98 percent responsible for all the bay's pollution on account of its willful dumping each day of some 27,000,000 gallons of inadequately treated waste.

The report on Perdido Bay by the Department of the Interior also made certain recommendations, which you have heard, and we on Perdido Bay again took heart, but not for long. The bay instead of becoming better became worse, and finally on August 4, 1970, a news release was issued by the Corps of Engineers at Mobile, which in part said:

H. W. Gamble

"Mobile, Alabama, August 4, 1970. The Corps of Engineers today announced the new permit requirements under the Refuse Act, 33 U.S. Code Annotated Section 407, concerning all discharges into navigable waters. Permits will be required for all industrial discharges into the navigable waters and their tributaries. New permits will be required where existing permits were granted without adequate consideration of the quality of the effluent. Permits will also be required for current discharges into navigable waters where no permits have been granted. While permits will be required for all future discharges into navigable waters and their tributaries, the Corps of Engineers will initially concentrate on major sources of industrial pollution not covered by existing permits."

Well, this was really great news to us on Perdido Bay because if the Federal Government was going to attack pollution by invoking what was commonly referred to as the Refuse Act of 1899, we knew that quick relief could be obtained in that this law simply made it unlawful to discharge anything considered refuse into the navigable waters of the United States, unless a permit for such discharge had been first obtained from the Corps of Engineers.

So with high hopes I wrote the Corps of Engineers at Mobile, told them what was happening to us in Perdido Bay, and inquired if the St. Regis Paper Company had obtained a

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permit as required by the Refuse Act. In reply the Corps of Engineers stated in a letter dated August 25, 1970, that a review of their files revealed no permit requested by or issued to St. Regis Paper Company for making discharges into Perdido Bay.

But since they said nothing in their letter about taking any action against St. Regis for violating the Act, I wrote the Corps of Engineers again, called attention to their news release, and inquired if they had any present plans to induce St. Regis to apply for a permit as the law required.

On October 2, 1970, the Corps of Engineers replied that they had no such plans and said, quote, We are awaiting implementing instructions on definitive procedures. And that was almost five months ago. Today we have heard that July 1 they are going to require permits.

Now, these "definitive procedures," those words are something that I have heard a lot about and we have heard a lot about, we run into them all the time. Nobody seems to know exactly what is meant by "definitive procedures," where they come from or when they are going to arrive.

But recently Mr. William T. Ruckelshaus, the first Administrator of the new Environmental Protection Agency, was quoted in the news as saying that his agency plans to use the newly revived Refuse Act of 1899, quote, to the fullest extent

H. W. Gamble

possible, and that by requiring dischargers to obtain permits for all discharges into navigable waters we will be able to arrest existing and potential pollution problems before the damage is done, before further damage is done.

What we would like to know, Mr. Chairman, Mr. White, is whether Mr. Ruckelshaus really means action now or whether this is just another fine promise of what might happen when definitive procedures are handed down from the powers-that-be at some unknown time in the future, which in all probability might come too late.

In the last two weeks, I believe, President Nixon has come forward again with fine plans to fight the pollution of our waters. His new enforcer is the EPA. The chief target, so it is said, will be the big industrial polluters. Congress is being asked for huge sums to support this program. Commenting on this, last week's Time magazine had this to say:

Two days later he, Mr. Nixon, assured a Washington meeting of 250 executives from big business, some of them facing prosecution, that his Administration, quote, is not here to beat industry over the head, end of quote. It will not make it the scapegoat of public demands for cleaner air and water.

Well, about this, one thing we know. This Administration

H. W. Gamble

has certainly done nothing in the way of beating St. Regis over the head so far as concerns their plant at Contonment. On the contrary, it has permitted St. Regis to continue beating the heads of us Perdido Bay people to the tune of some 27,000,000 gallons of gook per day, and we want it stopped.

It should be stopped. It is wrong; it is legally wrong and it is morally wrong. St. Regis has no right to destroy and exploit the created glory of Perdido Bay or any other body of water made by God for man to enjoy and use in the proper way.

Thank you. (Applause.)

MR. WHITE: Thank you, Mr. Gamble.

I would respond to you, sir, with respect to Mr. Ruckelshaus's intentions, and I think he has expressed these in the news media recently. I think he is dedicated to cleaning up these pollution problems where they exist, and he has pledged full support and use of every tool available to accomplish this.

MR. GAMBLE: Including the 1899 Act?

MR. WHITE: Yes, sir. And if I might, I would comment very briefly on that.

An Executive Order came down, was issued, that is, by the President, which gave the Corps of Engineers primary responsibility for administering this, as you know, but also

H. W. Gamble

vested in the Environmental Protection Agency final authority on ruling with respect to water quality aspects of these permits. Now, it also takes into account the State's standards and comments in these cases, and I believe that it is provided that no permit will be issued over State objections.

MR. GAMBLE: Thank you, sir.

MR. WHITE: Well, just very briefly, one other very small comment.

MR. GAMBLE: Yes, sir.

MR. WHITE: The so-called Refuse Act, of course, has been on the books for a long time, since 1899, but I don't believe it was really expanded and thought to be a real pollution fighting tool until a Supreme Court case in 1966, which greatly expanded the interpretation that most people had been giving to it—that is it primarily being a navigational tool. By that I mean a tool to prevent undue deposits which would restrict or affect navigation.

But again I would say that Mr. Ruckelshaus has publicly on many occasions recognized this Act and pledged to use it to the best of his ability in the circumstances.

MR. GAMBLE: That is very heartening news. It is a tool that can be very effective, the way it is set up, and we hope it will be.

MR. WHITE: Thank you, sir.

R. Walker

Are there any other comments or questions?

Thank you very much.

DR. MYERS: Mr. Roland Walker, charter fisherman representing the Orange Beach Deep Sea Fishing Association.

Mr. Roland Walker.

ROLAND WALKER, CHARTER FISHERMAN

ORANGE BEACH DEEP SEA FISHING ASSOCIATION

ORANGE BEACH, ALABAMA

MR. WALKER: Distinguished gentlemen of the panel, ladies and gentlemen.

I am not a speaker either, but I would like to speak for the fathers and grandfathers because I heard a lady do an awful good job for the mothers and grandmothers awhile ago.

I am a charter fisherman, but I can take you back a little ways, back to 1924 when I was six years old and my father was running the mail by boat from Mifflin, Alabama, to Millview, Florida. He ran that route for 14 years. He has gone so far as to keep me out of school sometimes to steer for him when he had a boat that the motor wasn't running too good or for some other reason. And back in 1924 I can remember at Millview over here, which at that time there was a railroad spur to the water, seeing about 25 people fishing off of the pier and off of piling there at Millview and they were catching fish.

R. Walker

Well, then, after my father quit the mail route, he went into the commercial fishing business. He raised 10 children by commercial fishing on Perdido River. The Lord knows now that we would have starved to death had this been in 1960, because you could not possibly catch enough fish in Perdido River at this time to feed a family of 10 or a family of 3 now.

We have been saying a lot about the bear, which I will call St. Regis, but we don't want to forget the foxes either, like myself and some of the rest of you gentlemen. If we stop St. Regis from polluting the water as they are doing, and it looks like that we may at least make a dent in that, we still have the pollution that we are putting in the water, the pollution from the houseboats, the private boats which have living facilities, beds and showers and toilets, and so forth. And it is not an uncommon thing to see someone swimming off of a houseboat which is dumping its refuse into the water. But, I'll tell you something, if they could see a sewage pipe running into the water there from their house, they wouldn't be swimming there.

So we have got to look at ourselves along with St. Regis and the other industrial waste people. It is also true that our cities, which is us, are very large polluters. So we have got a big job.

R. Walker

It makes tears in my eyes to realize how much damage we have done, but it also makes joy in my heart to know that it has come to our attention that we have men of knowledge that are working on these problems, and Godspeed to all of them.

Thank you. (Applause.)

MR. WHITE: Thank you very much, Mr. Walker.

DR. MYERS: Is Ray Makofsky here? He is a student and I believe that he had to return to his school. There were a number of other students.

What was the school, Mrs. Allen?

MRS. ALLEN: Foley High.

DR. MYERS: Foley High. Do you know how many were here this morning?

MRS. ALLEN: No, sir.

DR. MYERS: There were a large number of them, and I am sorry that we did not get to them in the morning session.

MR. REED: Perhaps, Doctor, they have a prepared statement that they would like to put in the record.

They will have 15 days to do so, Mrs. Allen, and we would love to have those students represented in the final report. (The above-mentioned letter follows.)

MRS. ALLEN: Thank you, sir. I will get word to them.

DR. MYERS: Mr. S. A. Graham, property owner from Josephine, Alabama.

Mr. John C. White,

Reconvened conference, Feb.
25, Pensacola, Fla.

As appointed chairman of the Foley, Gulf Shores student division, I would like to make a statement on the Perdido Bay pollution problems. Since living on the Gulf at Pleasure Island, I have noticed a steady increase of pollution along our beaches. This problem has gone unattended long enough, and has to be dealt with without further delay.

Along the lines of complaints made by Mr. and Mrs. Elalash and other dignitaries from the Alabama side of Perdido Bay, I wish to see St. Regis cleared up. The new anti-pollution standards called to our attention by the representative the day of the 25th in February was far from good. I submit that St. Regis not be closed down,

but placed under a set fine for each day that it empties its waste above the set standards of the pollution council. This seems to me a measure not as drastic as closing down St. Regis, but hurting them enough that they will try whole heartedly to clean up their mess in Perdido Bay and along the Gulf Coast.

Enclosing I would like to say, the four people, which came with me all agreed to this letter. Their names are Stephen Jay, Tommy Lee, Eugene Petrey, Alice Prochazka, and my self.

I submit that this letter be placed on record.

Thank you, I remain,
 Carl Ray Matosky

S. A. Graham

S. A. GRAHAM

PROPERTY OWNER

JOSEPHINE, ALABAMA

DR. MYERS: I have two addresses for you, is that correct?

MR. GRAHAM: Mr. Chairman and members of the panel, ladies and gentlemen.

We own a little motel over there on Perdido Bay, and where we are located the bay is from three to five miles wide and at times you can see this foam clear across the bay, just about. And I don't know whether you have thought about, there is a lot of shrimping used to be done in Perdido Bay and for the past two or three years the shrimp haven't been there. The commercial shrimpers used to come in there, I have counted 20 commercial shrimpers in there at one time, but last year I think there were one or two. This pollution must be holding back or killing our shrimp.

Not only that, I have a little oyster bed out at the edge of the deep water and recently I have found clusters of three, four and five half grown oysters that are dead, opened up, which weren't there five or six years ago.

And this foam, I have seen it washed up on our beach there six and eight inches high when the wind would change, and we have to watch it because we have a lot of little children

S. A. Graham

that come there from all over the country and when that foam is there we tell them to stay out of the water. You know they are disappointed on that.

And I just wish that we could do something to stop this pollution.

I thank you.

MR. WHITE: Thank you very much, Mr. Graham. (Applause.)

DR. MYERS: Mrs. Ruth McDonnell, President of Living Waters--Target 2001 A.D., from Daphne.

RUTH MC DONNELL, PRESIDENT

LIVING WATERS--TARGET 2001 A.D.

DAPHNE, ALABAMA

MRS. MC DONNELL: Chairman White, members of the panel.

I am Ruth McDonnell of Daphne, Alabama, President of a loosely-knit State organization known as Living Waters--Target 2001 A.D.

Our organization is deeply concerned over proposals of oil companies planning to exploit our Alabama coastal waters.

MR. TRAINA: Mrs. Mc Donnell, excuse me, could you move that mike in closer to you?

That will be fine. Thank you.

MRS. MC DONNELL: Currently we are strongly protesting

Mrs. R. McDonnell

to Governor George Wallace and Alabama legislators any and all proposals to drill or explore for oil and gas in our coastal waters. Some 25 to 30 thousand acres of submerged lands were leased by the State of Alabama in 1968 and 1969 to major oil companies. Four thousand eight hundred eighty-three acres, more or less, in our delta, over nineteen thousand acres between Dauphin Island and Fort Morgan, and one thousand nine hundred twenty-two acres in Wolf Bay, a fact of which the public is just becoming aware.

We know that if even one oil well is drilled in Alabama coastal waters it will adversely affect your waters here in Florida and also those in Mississippi. Realistically, one oil well in Alabama waters would mean hundreds. This would certainly affect the waters of our sister States.

I have been asked by Mr. Benjamin Kilborn, President of the Alabama Wildlife Association, to present to you this statement.

(Mrs. McDonnell read the following statement:)

BENJAMIN H. KILBORN
President
P. O. Box 2565
Mobile, Alabama 36601

JOHN B. LEE
1st Vice-President
Monroeville
Alabama 36460

SHELTON R. SMITH
2nd Vice-President
315 North 3rd Avenue
Opelika, Alabama 36801

DR. DAN SPEAKE
3rd Vice-President
Wildlife Research Building
Auburn, Alabama 36830

FRANK A. McLEAN
Secretary-Treasurer
64 North Union Street
Montgomery, Alabama 36104

ALABAMA WILDLIFE FEDERATION

AFFILIATED WITH
NATIONAL WILDLIFE FEDERATION

P. O. BOX 2565
MOBILE, ALABAMA 36601

February 24, 1971

Gentlemen:

The Alabama Wildlife Federation is informed this conference is for the purpose of seeing what progress, if any, has been made toward carrying out the recommendations made last year with regard to Perdido Bay.

We wish to call to your attention what we consider the biggest threat ever to the purity of Perdido Bay, namely the possibility that drilling for oil may soon commence in Wolf's Bay.

For your information, former Alabama Governor Albert Brewer leased 1922 acres of Wolf's Bay to the Signal Companies, Inc., doing business as Signal Oil & Gas Company. This lease is dated November 14, 1968, and is for a five year term.

Environmental Control demands that this type activity be kept out of prized recreational areas. Recent experience has proven that the art of offshore drilling for oil is far from perfect. Oil spills and major blowouts are not unheard of. The mere presence of oil drilling activity in this area, even if done without oil spills, will destroy the attractiveness of this area to thousands who have no desire to fish, boat and ski around oil dericks and supporting industrial facilities. Many do not desire to own property where the threat of oil spills and blowouts are ever present.

CONSERVATIONISTS UNITE

Conservation



Pledge

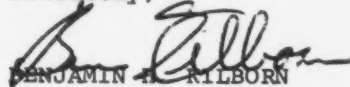
I GIVE MY PLEDGE AS AN AMERICAN TO SAVE AND FAITHFULLY
TO DEFEND FROM WASTE THE NATURAL RESOURCES OF MY COUNTRY—
ITS SOIL AND MINERALS, ITS FORESTS, WATERS, AND WILDLIFE

The Alabama Wildlife Federation and the Mobile County Wildlife and Conservation Association, together with many other civic organizations have gone on record against any such activity in Alabama waters, including this area.

The best way to insure clean water is to stop any oil activity in these waters rather than allow it and then have to come back to conferences such as this in future years to see what can be done to clean it up. In short, we advocate preventive medicine.

We bring this matter to your attention with the request the Federal Environmental Protection Agency investigate the entire question of whether any oil activity should be allowed in Wolf's Bay or any other Alabama Waters.

Sincerely,



BENJAMIN H. RALBORN

BHK:sfh

Mrs. R. McDonnell

MRS. MC DONNELL: Thank you.

MR. WHITE: Thank you very much, Mrs. McDonnell.

Any comments or questions?

DR. MYERS: Yes, I want to make a comment.

Someone raised a question this morning about seismic testing, and I believe that the control of bottom lands as far as Alabama is concerned is the responsibility of the Department of Conservation, and any leases would be the responsibility of the Department of Conservation in Alabama. I don't know what it is in Florida. Now, as far as drilling for oil, the drilling on lands leased or owned would be a function of the Oil and Gas Board in the State of Alabama.

So I wanted to clarify those things. They are really outside our particular purview here except as it might apply to the pollution problem, which is our concern.

MR. REED: Doctor, we talked about this and ran the seismic testing that was done last year down to earth. All leasing of bottom lands in the State of Florida are done by the Governor and the 6-member cabinet acting as the trustees of the internal improvement fund. The seismic testing done last year, which was alluded to earlier in today's hearing, was done under a valid permit of the State of Florida by what is called a gun-type seismic tester, which is supposed to send down a high frequency noise, which in turn is picked up on recording

Mrs. R. McDonnell

devices to give a profile of the bottom. The gun apparently was not working satisfactorily; it was withdrawn from the bottom, and the firm proceeded to test it above water and that is where the extraordinary vibrations which the people in Alabama and Florida felt came from.

All I can say is that though not in our purview, I will bring back to the trustees the strong recommendation that if this occurs again that the State prohibit this type of testing inside the territorial waters. If the gun isn't working again, they can get the devil out of the bay.

But as for future leasing in this area, this will be the concern of the appropriate agencies in both governments.

MR. WHITE: I would add too, Mrs. McDonnell, that we will investigate this from the Federal Government standpoint and see what responsibilities we have in this area. We are not absolutely sure at this time.

We very much appreciate your bringing this matter to our attention and we will look into it.

DR. MYERS: Mr. Chairman, I would like to call on Mrs. Thomas R. Horne, Alabama Environmental Quality Chairman for the League of Women Voters from Fairhope.

Mrs. Horne.

Mrs. T. R. Horne

MRS. THOMAS R. HORNE

ALABAMA ENVIRONMENTAL QUALITY CHAIRMAN

LEAGUE OF WOMEN VOTERS

FAIRHOPE, ALABAMA

MRS. HORNE: Thank you, Mr. Chairman.

I speak as State Chairman for the Water Resources and Environmental Quality for the League of Women Voters of Alabama. I also speak in behalf of the Alabama Conservancy, of which I am a board member, and in my own behalf as a resident of Baldwin County.

I hope here to make three points, and I shall try to be brief about them.

First I have no strict parochial concern here today. Rather, I speak for the citizen interests in the entire gulf waters and estuaries. Less than one year ago we joined with many league members from Florida, Louisiana and Mississippi in the gulf waters seminar only a few miles from here. We had the help of a grant from the Federal Water Pollution Administration and the cooperation of many men and women who are here today.

We were concerned then, as we are concerned now, about the serious degradation of waters for both States and, indeed, for all of the American gulf coastal areas. Many of those citizens have become frustrated, as you have heard here today,

Mrs. T. R. Horne

mostly because of lack of technical knowledge or the ability to present such knowledge or have it presented even if it were quickly available.

And this brings me to my second point. In one of its conclusions printed in the National Estuarine Pollution Study of March 1970, and it is here if you would like to identify it, the national water pollution control administration recommended that the vast bank of data buried in technical reports be made available in an inventory so that citizens who are deeply concerned and intelligently aware of the problem can see for themselves what our problems are or what causes them or who causes them and can then evaluate some of the options that are available, complex though they may be.

One of those options, we believe, will reinforce our own belief that internalizing the costs of whatever is going on in our coastal waters, internalizing those costs is the ultimate goal, so that what products we have will bear the costs not only of the material and the labor but the cost to the environment as well, and we think that should be applied to municipal waste as well as industrial plants and the rest.

My third point is personal. My first job in Alabama some 32 years ago involved an investigation in salt water biology in the coastal waters between Perdido and Mobile Bays. I have been intimately involved in the biology of the area ever since.

Mrs. T. R. Horne

At the present time, I run two of the breeding bird surveys for the Department of the Interior. One involves the 25-mile coastal strip from Florida to near Fort Morgan; the second is an inland route paralleling Perdido Bay from southward up to the Styx River. It is impossible for me to look back with less than complete dismay upon the degradation of the quality of the waters during the time I have worked there.

To recapitulate, our concern is total. We must insist upon management not only from our own communities but for those of our neighbors as well and for industry as well. As a biologist, I can be neither more nor less concerned for Perdido Bay than for Escambia Bay or Mobile Bay or for the waters that feed those bays themselves. Those wastes all are our unused resources. We need those resources. We need to reuse those wastes and we must learn to use them.

Once again we ask you who are responsible in Federal in State, in local areas to help us implement the decisions to make better use of the citizen groups who are ultimately the people who must make your acts effective and who must eventually pay the bill for any improvement.

Thank you.

MR. WHITE: Thank you, Mrs. Horne.

(Mrs. Horne submitted the following addendum to her testimony:)

Mrs. T. R. Horne

"Some additional problems regarding the Bay and the streams feeding it are of continuing concern.

"1. We find no data regarding herbicide or insecticide run-off and its effect on the Bay ecosystem although Bureau of Sport Fisheries and Wildlife research reports indicate that the problem exists.

"2. Air pollutant effects on waters adjacent to effluent sources must surely affect water quality, especially the interface relationships and perhaps the aquatic life.

"3. What are the effects of major installations (bridges, channel installations), dredge operations and fill areas involved in housing and recreation developments?

"4. Are there no guidelines for size (especially length of piers, docks, and beach shelters); are there no guidelines regarding the number of such installations in the beach and shoreline areas that are particularly fragile, ecologically speaking?

"5. We are assured that techniques are available for managing highway installations in critical estuarine areas without the massive damage that is common. Should conferences on bay and estuarine pollution not include State and Federal highway, agriculture and related agency representatives, if their operations add to the degradation of waters?

"6. We concur with the recommendations of the Bream

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Fishermen's Association regarding the need for regulation of oil development on land adjacent to water and the need for improvement of water quality once pollution sources have been reduced."

MR. WHITE: I will ask Mr. Traina to respond and make a comment on the inventory.

MR. TRAINA: With regard to the inventory, the WQO, as we are now called, is pursuing this with, frankly, the limited resources that were made available. But there is in Washington now, I am trying to think of the name of the individual, I can get it back to you, who is responsible for developing this inventory, and frankly, it is a question of just time and money and people to put it together, but it is beginning to be developed and it is available to you or anyone else.

MRS. HORNE: This I don't think we can say too strongly. There are a great many people who lack the technical competence to evaluate the material, but I believe it is now the responsibility of the agencies themselves to give us some kind of guideline. Some of us don't mind wading through volumes like this, but some people can't do it and some are in technical language that even the best of us can't interpret.

MR. TRAINA: We recognize that and we are making as much progress as we can with the funds that we have available.

Thank you very much, Mrs. Horne.

Mrs. F. J. Kennerson

MRS. HORNE: Thank you. (Applause.)

DR. MYERS: Mrs. F. J. Kennerson, of Lillian Community,
Lillian, Alabama.

MRS. F. J. KENNERSON

LILLIAN COMMUNITY

LILLIAN, ALABAMA

MRS. KENNERSON: Thank you.

I do appreciate your help and everything that you
are doing.

If you run short, would you rather for me to submit
this, it is kind of long, instead of reading it out?

MR. WHITE: Do as you like.

MRS. KENNERSON: O. K.

MR. WHITE: But I think we have enough time to hear
you out or if you could summarize.

MRS. KENNERSON: I would rather do this because--

MR. WHITE: Please don't feel that we are imposing
time restrictions.

MRS. KENNERSON: Well, I know it is taking time.

I am Mrs. F. J. Kennerson, Post Office Box 174,
Lillian, Alabama. I live north of the bridge. I have not
heard too much about north of the bridge today.

I am a native of Alabama from Foley, Alabama. I know
all the waterways and land in this area. I married a service

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fellow from Canada. He fell in love with this land and waterways of this area.

Ever since we first met we wanted to live in Lillian on Perdido Bay. We traveled all over the country and this we talked about everywhere we went. We told our friends, relatives, everyone about this area. We were proud, very proud, of our area and a lot of them wanted to come south.

We have lived in Lillian for over four years now and we have had company from Canada, Maine, Connecticut, Virginia, Mississippi, Louisiana, Texas, California, Illinois, and other States. Some of these families and kinfolks had been here before, before my time, and they don't care to come back until the bay is clean.

Years ago they enjoyed our beaches and now when they were here we couldn't even sit and enjoy our yard if the wind was right, and this is bad. We fight the water pollution, but we also have the air.

I remember myself when we had to pay to go across the Lillian Bridge. My father used to pay just to drive across to see the beauty, the beautiful sandy shores north and south of the bridge. They were beautiful. When we moved back four years ago it was unbelievable. It is getting worse instead of getting better.

I have sat down at the bridge and watched cars from

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out of State that have been traveling, you could tell they was travelers, going across both ways. This is not good. Other people see this. They have stopped and took pictures. You know what they are going to turn out when they develop. This is not good for either State. This is not good for any of us.

We didn't know the waterways was like this when we retired, not only the water but the air. So now we have got this to fight, I feel, for the next 20 years after being retired from the service. Nothing seems to be getting done.

I belong to all the club activities; I know how a lot of people feel in there. We appreciate your help, don't get us wrong, but we hope and we pray you can help us.

We, all of us, in the Lillian community love our area, we want to enjoy our area, but it is hard. Some days you can't even sit outside, like I have said before, you can't enjoy the water. If you buy good swimwear and go swimming, you ruin it. You go boating, you go skiing, you are scared to fall off or do anything to swallow the polluted water. You can't go fishing; my husband and I love sports; you can't eat the fish.

What is there left to do? So we are going to help and we hope you help. We have got to have something done. So we hope that in time there is hope.

I can look back. Some day I hope I can drive across the bridge north and south and see what I seen when I was a

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child. We need your help so we can have this once again. I know several families from other States, they want to buy land in Lillian, they want to settle there, but not until something is done for Perdido Bay.

Your help and efforts will be greatly appreciated. If we can help, we will, our dreams come true and back to clean air and water once again like we had years ago.

Thank you.

MR. WHITE: Thank you, Mrs. Kennerson. (Applause.)

Yes, Mr. Patton.

MR. PATTON: I would like to make one comment at this point.

This is a water pollution control conference, but on the subject that was just brought up by the last speaker, efforts or steps have been taken to initiate an air quality region which will stretch from practically the center of the State of Florida to the Apalachicola River all the way to the Alabama line, portions of southern Alabama and over to Biloxi, Mississippi. We are in a little bit of a state of limbo caused by the changes that were made in Congress when they recently amended the Clean Air Act, but we have started the ball rolling and we hope to get it moving again very shortly. We expect to receive some guidelines from Washington as to how the amendments to the Clean Air Act will affect this action.

Mrs. F. J. Kennerson

But please do not forget that this is another thing that we are looking at, and in this we want to keep the air pollution control reductions moving as well as to bring the water pollution under control, and we don't want to do one at the expense of the other.

MRS. KENNERSON: Thank you.

DR. MYERS: I might comment in that connection that Alabama also has a laboratory for air pollution control in this area working on emissions in the Mobile district, and as you know, several of you, we have just held hearings recently and adopted standards. We are waiting for sufficient enforcement legislation that must come out of our next session of the legislature in order to put this into full force and effect.

But we are in full cooperation with neighboring States for this interstate air pollution control area, which does have a connection with water pollution because you can't separate these just as sharp as drawing a line.

Mr. Chairman, this is the last name I have on the list that wishes to speak, as far as I know now. There may be others, but I will leave that for you to ask.

MR. WHITE: Thank you, Dr. Myers.

And we will move right along now with the rest of the Florida presentation.

Mr. Reed, please.

K. K. Huffstutler

MR. REED: Mr. White, I will turn the microphone over to Mr. Patton.

MR. PATTON: First I would like to call on Mr. Huffstutler to give the progress report.

K. K. HUFFSTUTLER, CHIEF

BUREAU OF SURVEILLANCE

FLORIDA DEPARTMENT OF AIR & WATER

POLLUTION CONTROL, TALLAHASSEE, FLORIDA

MR. HUFFSTUTLER: Mr. Chairman, members of the conference, ladies and gentlemen.

I am K. K. Huffstutler, Chief of the Bureau of Surveillance, Florida Department of Air & Water Pollution Control.

It is the intention of this presentation to discuss the progress that has taken place concerning Recommendations 5 through 7 and related activities by the Department of Air & Water Pollution Control as it pertains to Bayou Marcus and Perdido Bay.

Our Enforcement Section will discuss Recommendations 1 through 4 and a portion of 5 as they apply to the legal activities against St. Regis Paper Company and two sewage treatment plants on Bayou Marcus.

Recommendation No. 5 had to do with the consolidation into a central facility of all of the discharges into Bayou Marcus. Of prime interest were six domestic waste treatment

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plants. These six plants contribute an unknown quantity of waste ranging from primary treated through extended aeration. The fact that two of these plants utilize Imhoff tanks fairly well establishes the antiquity of the systems and provides a rough idea as to the length of time a problem has existed on Bayou Marcus.

The authorities, vitally interested in this problem and a solution, anticipated the first step toward fulfillment of the conferees' recommendations would come through a referendum to consolidate the governments of the city of Pensacola and the County of Escambia. In October of 1970 the people voted down such a referendum. As a result, the Escambia-Santa Rosa Planning Council is working toward the development of a plan that would accomplish the purpose of the recommendation.

We hasten to point out that in the past the Escambia-Santa Rosa Planning Council had little or no legal muscle. They were an advisory body, and the respective county commissions were at liberty to either accept or reject their recommendation. New Federal requirements regarding PL-660 construction grants have changed this picture. They require development of comprehensive regional plans as a pre-condition of Federal construction grants, and the State has delegated this task to the official Regional Planning Councils in the Standard Metropolitan Statistical Areas.

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It is, therefore, the responsibility of the Escambia-Santa Rosa Regional Planning Council to develop comprehensive plans in accordance with new Federal guidelines as a pre-condition to construction grants that may be issued in the Escambia-Santa Rosa Counties area. There is now evidence of strong cooperation between the Department of Housing and Urban Development and the Environmental Protection Agency so that funds for both waste collection systems and treatment facilities are involved.

The Planning Division of our Department has advised all Regional Planning Councils of their responsibilities and the Councils are now working toward meeting these responsibilities and are seeking Federal funds to assist in accomplishing the necessary related planning. Federal planning funds for this purpose are available on a 50-50 basis, and matching funds will have to be made available at the local level to accomplish the job. It is, therefore, incumbent on the local authorities to assure that their Regional Planning Councils accept the legal responsibility and that adequate planning funds are made available to accomplish the job.

Since the rejection of the consolidated form of government, the city and county are attempting to establish a water and sewer board whose responsibility, among other things, will be to work out the difficulties of eliminating such problems

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as they exist in Bayou Marcus.

The Bureau of Sanitary Engineering of the Department of Health and Rehabilitative Services will report on Recommendation No. 6 and the six waste treatment facilities discharging into Bayou Marcus.

Recommendation No. 7 had to do with a moratorium on construction dredging and filling and the establishment of a shoreline for Perdido Bay. In April of 1970, the Board of Trustees for the Internal Improvement Fund, through their staff, requested the Escambia County Commission to proceed with the necessary steps in establishing the shoreline in Perdido Bay. As of February 17, 1971, the Internal Improvement Fund had not received a reply from the County Commission.

In the case of Perdido Bay, the lack of response from Escambia County may be understandable in that Recommendation No. 7 included the State of Florida, Escambia County, Florida, the State of Alabama, Baldwin County, Alabama, the U. S. Corps of Engineers and the Department of the Interior. Perhaps, as in the case of the Department of Air & Water Pollution Control, Escambia County felt reluctant to assume the initiative to assemble the representatives of all those involved. Our Department recommends that the Chairman of this Interstate Conference assume the initiative in assembling all of the pertinent parties to see if the establishment of a shoreline

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cannot be done in the near future.

One difficulty involving Perdido Bay is that the Perdido Pass Inlet Channel has filled in to an extent that approximately 6 feet of water exists near the marker buoy. Normally, this water depth is maintained at 12 feet. The new sandbar inside the pass has created a weir from the east jettie westwardly into the channel. The bar has greatly reduced the flushing action that normally occurs in Perdido Bay. The establishment of a shoreline and a dredging plan would provide better maintenance of Perdido Pass channel and thereby provide the best possible flushing action in the bay.

Mr. Chairman, that constitutes our presentation.

MR. WHITE: Thank you, Mr. Huffstutler.

I would like to reiterate one comment I made earlier when Mr. Davis made his presentation for the Corps. It would be my recommendation that the conferees adopt a plan of no construction dredging in Perdido Bay as our plan. And as we indicated, too, if local officials see fit to meet and develop an acceptable plan, then, of course, this would be considered.

But until that occurs, I think it would be incumbent upon the Environmental Protection Agency to turn down any construction dredging permits.

MR. PATTON: Mr. Chairman, I don't believe that we can issue any certificate at present until the County

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Commissioner does move to establish such a plan.

MR. WHITE: That is correct, I believe that was established at the Escambia conference day before yesterday. But this would not apply to the Alabama shoreline and I would think that we could consider this type recommendation concerning it.

Would you care to comment, Dr. Myers, or Mr. Beck?

DR. MYERS: Mr. Chairman, I am a little concerned. I am not quite sure what effect this might have on the Alabama side in terms of getting some of these boats out.

MR. WHITE: Dr. Myers, I think I can answer that. This I would consider maintenance dredging--

DR. MYERS: All right.

MR. WHITE: --and the moratorium would not apply to channel clearance and maintenance dredging. Of course we would, I think, recommend the same type safeguards that were recommended for the Escambia Bay area.

DR. MYERS: I don't want to tie our fishermen up because they are going to have to get out of there to get some place where they can fish.

MR. WHITE: No. It was not intended to prohibit this type operation.

MR. HUFFSTUTLER: Mr. Chairman, we can see the possibility of several different shorelines being established

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in Perdido Bay unless all of those pertinent parties are assembled at one time. Now, if it is the recommendation of the conferees that Florida take the initiative in assembling these people, we shall do so. But during the last conference this was unclear.

MR. WHITE: I think we probably need to consider this in the executive session.

MR. HUFFSTUTLER: All right.

MR. WHITE: And arrive at some program for Perdido Bay.

MR. HUFFSTUTLER: This is our request.

MR. WHITE: Thank you.

MR. HUFFSTUTLER: Thank you.

MR. TRAINA: I would like to just add one thing to that point that Mr. Huffstutler made with regard to requirements for planning as a pre-condition for Federal funds. I know the regulations that have come out with regard to 660 funds make that perfectly clear that planning must take place before Federal funds will be made available for the construction of waste treatment plants.

MR. PATTON: Thank you, Mr. Huffstutler.

Next I would like to call on Mr. Tisdale, Division of Health, Department of Health and Rehabilitative Services.

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WAYNE E. TISDALE, REGIONAL ENGINEER
DIVISION OF HEALTH, DEPARTMENT OF
HEALTH AND REHABILITATIVE SERVICES
JACKSONVILLE, FLORIDA

MR. TISDALE: Mr. Chairman, I am Wayne Tisdale, Regional Engineer for the Division of Health, of the Department of Health and Rehabilitative Services, State of Florida. I would like to briefly report on the status of sewage treatment facilities in the study area. There will be some duplication or overlapping of what Mr. Huffstutler had to say, but at any rate this is prepared, so I will proceed.

The January 1970 report by FWPCA recommended consolidation of six sewage treatment plants that discharge to Bayou Marcus Creek. Data were presented on six plants, but only five of these actually discharge to Bayou Marcus Creek. Treatment facilities serving Saufley Field Naval Air Auxiliary Station discharge to a drainage ditch and then to Perdido Bay more than two miles from Bayou Marcus.

During the 1970 conference, discussion included some nine sewage treatment plants in Florida as related to Perdido Bay. The final recommendation stated in part, and I quote, "sewage treatment facilities on Bayou Marcus shall be consolidated into a central facility with removal efficiencies of 90 percent."

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With all due regard to any errors and any omissions, it should be clearly understood that the intent and the objective is to accomplish unification or consolidation of waste disposal systems to the maximum extent feasible and practical. The Florida Division of Health and its predecessor, the State Board of Health, did strive and continues to strive toward this end. In a report to the Florida Air & Water Pollution Control Commission delivered May 21, 1969, our office recommended and I would like to again quote, "through appropriate planning and resolving of franchise matters, efforts be exerted by all concerned to consolidate, combine or otherwise phase out several small treatment facilities which receive minimum attention or operation." It is interesting to note the similarity of the later recommendations, that is some nine months later.

As a matter of interest, nine plants do not encompass the entire waste load to the Perdido Bay watershed. There are a number of other disposal facilities for commercial establishments, schools, and trailer parks, in addition to industrial types of wastes including coin laundries. This point is made to further emphasize the need for the unification of utilities.

With respect to consolidation--and even though we are talking about utilities; this seems to be a dirty word in Escambia County--there are some problems to overcome. The ownership of utilities nearly numbers the same as the disposal

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facilities. Community-type systems are practically all operating under franchises. The problem then becomes--who buys out whom and where does the money come from? If systems are taken by condemnation, the same problem exists, and in order to take by condemnation it assumes that this has to be a public or a political body--how are the funds appropriated?

In 1970 a proposed legislative act was drafted which would have created a water and sewer authority for all of Escambia County. But this proposal did not meet with success. At the present, discussions are under way between the Pensacola City Council and the Escambia County Board of County Commissioners toward the possibility of providing a unified utility system. The discussions appear to be proceeding well and we will hold forth a great deal of optimism and hope. Should results not be obtained in a reasonable time, effort should again be made to obtain appropriate legislation, as these two methods, that is legislation or an agreement between city and county, appear to be the only possibilities for an overall solution.

With these somewhat gloomy comments behind us, I will briefly discuss the nine larger sewage treatment facilities in the Perdido Bay watershed.

First, Saufley Field Naval Auxiliary Station.

There has been no change in this facility. In April 1970 consultants for the city of Pensacola completed an

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engineering study indicating that waste could be pumped to the city's Montclair system, which at that time was being considered for expansion. At the present we have had no further information divulged as to the Navy's position, in fact, or the city's.

The Avondale Sewage Treatment Plant.

This plant is now in final construction and evaluation stages, having been converted from a primary plant to an extended aeration plant of 350,000 gallons per day with tertiary ponding. It is now under excellent contract, laboratory control and reporting, and is averaging 90 percent BOD removal.

Devonshire.

There has been no change in this small plant. It has been on the verge of abandonment for several weeks. A trunk sewer from the Avondale system has been constructed to within a very short distance of Devonshire. The remaining work has been delayed by unexplained difficulties in obtaining a highway crossing permit from the Department of Transportation. At any rate, it is expected that this plant will be out of existence within 30 days.

Mayfair Sewage Treatment Plant.

There has been no basic change in this plant. There have, however, been significant changes in that the plant is now under contract operation and laboratory control, with excellent reporting. Work is presently under way on several

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heavy maintenance and modification items which should raise BOD removal from 80 to 85 percent, which it is getting now, to above 90 percent. If this is not successful, then other action will have to be taken with and by the owner with respect to disposition of the plant.

Montclair Sewage Treatment Plant.

There has been no change in this facility. For some-time the city has discussed enlarging this plant, but the latest information from the city now indicates some consideration of rerouting flows and removal of the plant. The plant reports indicate a BOD removal less than 90 percent with the plant handling an appreciable overload.

Wedgewood Sewage Treatment Plant.

This primary plant has had no change except that it is now under contract operation, laboratory control, and reporting. With several short-term exceptions, the effluent has been contained on the owner's property. Subsequent to a discussion with the owners on February 2, they are now proceeding toward a new treatment plant with a goal of being under construction within sixty days.

Fairway Mobile Home Park.

There has been no change in this plant. It is one of the better maintained and operated small plants in West Florida, with BOD removal well in excess of 90 percent. With a change in

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ownership and desired expansion of the park, a study has been initiated to determine feasibility of connection to other utility as compared to continued operation of the plant.

Lincoln Park Sewage Treatment Plant.

This city-owned facility is a contact stabilization plant of 80,000 gallons per day, followed by an aerated lagoon, with discharge to headwaters of Eight Mile Creek, which in turn discharges to Eleven Mile Creek. There has been some discussion of expanding this plant, but the city's present intentions are not known to me.

Perdido Bay Country Club Estates.

An extended aeration plant, followed by ponds, has replaced the previous primary plant. The facility is under contract operation, maintenance, and laboratory control with excellent reporting. The BOD removal is well in excess of 90 percent.

In summary, progress toward so-called consolidation is, at best, difficult to evaluate. It can be clearly stated, however, that upgrading of plants and their operation is proceeding well. Two primary plants, previously under citation by the Department of Air & Water Pollution Control, have been upgraded and new effort is under way for a new facility at Wedgewood. With the exception of Devonshire, which will shortly be removed from service, all plants are well attended and under

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laboratory control. Decisions should be reached shortly on the disposition of Fairway Mobile Home Park plant and we would trust also a decision on the city-owned plants of Montclair and Lincoln Park.

I would like to also add that the miscellaneous small systems that I mentioned as rapidly as we can get sewers available, get them in to get service extended, we are requiring abandonment of these small systems, requiring them to hook on-to central facilities.

I would like to also mention one point that Mr. Walker alluded to, that we people are the polluters. At the same time we do have a problem that is very much one of public health concern. I would not de-emphasize the need for pollution control, but sometimes we need to recognize that sewage treatment plants are necessary to remove the wastes from our yards. We must have both. We must have service and we must also have adequate treatment in operation.

This concludes my presentation.

MR. PATTON: Thank you, Mr. Tisdale.

With respect to the highway crossing difficulties, I made note, perhaps we can have a little conversation with Mr. Webb and perhaps expedite that a little bit, I don't know.

MR. TISDALE: I understand that, well, there was a permit at one time and apparently it expired two days before

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the contractor got to the crossing, so it had to be reapplied for. On the reapplication an open cut was refused and boring was required, and there is also a possibility that someone got into a discussion with one of the contractor's representatives and the discussion could have been heated. (Laughter.) But I understand that Mr. Spangenberg, the Assistant District Engineer, has agreed that a portion of the sewer which will parallel the highway, not the cut, not the quality, but a portion of the sewer within the right-of-way but paralleling street, he gave a verbal go-ahead for that pending the actual issuance of the permit for the crossing. So we are pretty close to having that plant out of service.

MR. PATTON: Good.

Let me ask you one question. Last year there was mention made about the disposal of septic tank sludge that this county owned or operated, sanitary landfill. Is this septic tank sludge still being disposed of to the sanitary landfill?

MR. TISDALE: Yes, it is. I do not know the status of the landfill, I have not been out there in sometime, so I would prefer not to comment, not having first-hand, fresh knowledge.

MR. PATTON: I hope that Mr. Sprague is still here from the Escambia-Santa Rosa Planning Council and he will take

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note of this, because I think that this is a case where we have to look into all these things in our planning and not ignore one aspect and concentrate on another.

MR. TISDALE: We would hope that we would remove a number of these problem areas in this overall plan so that the septic tank sludge would be, shall we say, reduced.

MR. PATTON: I think this is a very good goal.

MR. TRAINA: I am still very much concerned about apparently the comment you made, Mr. Tisdale, concerning lack of planning in this area. This has come up over and over again. I know our people have been down here and talked to some of the people about some Federal financial assistance in this area and we are still not seeming to make any progress.

MR. REED: I would think, Paul, that the same recommendation that we had in the Escambia conference yesterday will be pertinent to the Perdido conference today.

MR. TISDALE: Certainly it will be pertinent to apply to any portion of Escambia County, because the entire--well, you can draw the line where you want, but the entire southern half of Escambia County is an urban area and must be treated as such.

MR. REED: Very good. Very good.

DR. MYERS: I want to ask a question. Don't you have some place or some treatment facility that can take these septic tank wastes and handle it in a more organized fashion?

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MR. TISDALE: Quite frankly, at the present time, Dr. Myers, I don't believe we do have a plant that could take those in in any quantity.

DR. MYERS: My second question is that we have referred here to a sanitary landfill. Is this really a sanitary landfill or is this a dump?

MR. TISDALE: The landfill portion is well operated. The septic tank wastes, as I last looked at them, were not being put into the landfill. It was on the landfill property, but a ponded area not being filled. As I say, I don't know the present status.

DR. MYERS: That was the reason, because I had picked up from one of the previous testimonies that something was being dumped out on the, quote, sanitary landfill and that it would wash down the side of the bank and into the stream. I thought this is what I heard. And if it is, that isn't a sanitary landfill by definition, because if it contributes to air pollution or to water pollution, then it isn't a sanitary landfill and this is a misuse and a misnomer and actually a perversion of the area.

There ought to be some other solution.

MR. TISDALE: Let me clarify a little bit, if I might. Perhaps you are referring to the report that I referred to here of May 1969 where we discovered some leaching to Eleven Mile

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Creek from the older portion of the landfill. When I said the landfill is well operated, I think within the scope of the capability of the equipment to cover and compact almost continuously, it is. The older portion, of course, is where the leaching was occurring. So perhaps this will be helped.

DR. MYERS: I am still concerned. I am offering concern here, Mr. Chairman, over the problem of the type of pollution which we have been concerned with in the first conference and in this conference but hasn't been given too much attention. It has been raised by several of those who have given testimony.

We know that we can handle human excreta in a safe fashion to at least remove this as a problem to the health and welfare of the people. This can be done much easier than the removal of some of the viruses from these receiving waters. Some have raised the question about why don't they clean up the waters so you could go swimming in them, and I have a real firm misgiving with a definite scientific background over swimming in waters that were receiving even adequately treated sewage, and I am talking about not only secondary treatment but even with tertiary treatment, because even tertiary treatment does not remove the viruses from the water.

This is a recreational area and I am very much concerned that we as this conference push for as high a degree

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of treatment for our sanitary wastes as possible. We are asking industry to do some things. I think municipalities have a real obligation here. The people are demanding that this be made safe water and I make an earnest plea for both sides of this area that we do everything to treat our sewage to a high degree and I appreciate the effort that you are putting forward in this regard.

MR. REED: Doctor, I think that is a good recommendation. I guess we have a number of sources on the Alabama side, I don't know, but apparently there are a number of towns that if they have primary, I guess they just have primary at that.

DR. MYERS: No.

MR. REED: You have all secondary on the Alabama side?

DR. MYERS: Yes, sir. And as a matter of fact, I made a recommendation yesterday that even secondary treatment in the State of Alabama is not sufficient.

MR. REED: It is our minimum.

DR. MYERS: And I have said that even these minimums are not sufficient any more. We are having to go to tertiary treatment, and even with tertiary we foresee the time when we are going to have to have something better than that. But at least that is the best we can--

MR. REED: I didn't know that the town of Atwater--
Does Atwater have secondary?

J. F. deCastro

FROM THE AUDIENCE: Yes.

MR. REED: Well, I think the recommendation is sound and the disposal of sludge certainly should be part of the recommendations of these conferees.

MR. WHITE: These points are well taken, Dr. Myers. We appreciate it and I think this is something that we might need to address ourselves to at the executive session.

Any other comments or questions?

Thank you very much, Mr. Tisdale.

MR. PATTON: Next I would like to call on Mr. deCastro for the enforcement report.

JOSE F. DE CASTRO, CHIEF

BUREAU OF ENFORCEMENT

DEPARTMENT OF AIR & WATER POLLUTION CONTROL

TALLAHASSEE, FLORIDA

MR. DE CASTRO: My name is J. F. deCastro. I am the Chief of the Bureau of Enforcement of the Department of Air & Water Pollution Control, State of Florida.

The following presentation is a progress report on the present-day status of cases under enforcement in the Perdido Bay area. I shall cover two domestic waste cases and, of course, St. Regis.

First the Avondale Division of the West Florida
es that was cited by the Board of Health on December 7,

J. F. deCastro

1967, for disposing of primary effluent without adequate treatment.

The Department of Air & Water Pollution Control, the Commission then, took this case under enforcement during the first quarter of 1969. Secondary treatment facilities were reported completed and in operation by the latter part of 1970. A survey of the plant by our regional office is in progress to verify compliance with State rules. Hopefully, this case is approaching dismissal and closeout.

The Wedgewood subdivision of the Florida Utility Company is a different story. They were cited by the State Board of Health on January 22d of 1968 for disposing of primary effluent without providing adequate treatment. The Department of Air & Water Pollution Control took this case under enforcement in mid-1969. Lack of progress and the recalcitrant nature of the case moved the Bureau of Enforcement to strongly recommend the issuance of an updated notice and order covering more specifically the type violations incurred by Wedgewood Subdivision of Florida Utility Company. Abundant data on specific violations have now been gathered by our regional office, to wit:

- 1) Discharge of improperly treated sewage.
- 2) Failure to keep in service all equipment of sewage plant.
- 3) Failure to provide responsible personnel for

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operation of sewage works.

4) Failure to provide operating data and control test records.

5) Failure to notify the Department of an abnormal event, such as a recent dike break.

Based on these violations, on January 6th of 1971 our Board referred the Wedgewood case to the Attorney General's Office of the State of Florida for appropriate legal action, with the request that such action be strictly penalized in accordance with Florida Statute 403.161.

That is all for domestic wastes. Now we shall go with the case of St. Regis Paper Company.

As I said before, this is a progress report as of this date.

Our involvement with St. Regis Paper Company dates back to the year 1967, when the State Board of Health, Division of Industrial Waste, cited them for disposing of wastewaters without approved proper treatment.

Our Department finally took this case under enforcement during the first half of 1969. Shortly thereafter, in April, 1969, St. Regis Paper Company's proposed abatement program was approved by this Department. The State enforced project called for 90 percent minimum treatment by 1972.

Let us not confuse the issue. St. Regis will have to

J. F. deCastro

comply by January 1, 1972, with the 1967 citation or else with the approved 1969 abatement program approval. This encompasses 90 percent treatment. This achievement, and as we heard St. Regis say this morning, will be completed and finalized in October of this year, a few months from now. This will constitute a milestone, I will say a milestone, in whatever discharge levels are recommended as a result of this conference.

At the January 22, 1970, Federal-interstate enforcement conference, the conferees recommended that St. Regis Paper Company remove 90 percent of their carbonaceous waste material. Also, that waste effluent below the present riffle terrace not exceed the 8,800 pounds BOD per day and 2,600 pounds of total organic carbon per day. All settleable solids should be removed.

Furthermore, pursuant to the conferees' recommendations, the exploration of color reduction and foam removal discussed this morning were ordered.

St. Regis Paper Company has so far--and I repeat so far--duly complied with all milestones of the State enforced 1969 abatement program.

Incidentally, completion of this State enforced abatement program currently in progress will not only bring St. Regis Paper to compliance with State rules, but will result in a reduction of BOD discharges to Eleven Mile Creek to levels

J. F. deCastro

recommended at the 1970 Federal-Interstate enforcement conference. This is 8,800 pounds of BOD per day.

At this point, Mr. Chairman, I would like to--the question of the permit came up this morning, and I have here a copy of the permit issued by the State of Florida to St. Regis for compliance, but for the implementation of the abatement program pursuant to the 1969 approval. The confusion, I would say, that came up is the result of the date. We had no permitting system in the year 1969. This permitting system started this year, and St. Regis, at our request, moved ahead of time and submitted an application for the permit to cover the installation of the 1969 approval, our citation. The permit is dated December 8, 1970, but that was just a mere formality. We issued a permit to cover an approval of Mr. Patton, our Executive Director, in April of 1969.

The completion date, and I shall read, "Construction of this installation shall be completed by January 1, 1972." The latest I know is that they will complete by October. And as I say, it is just a milestone in whatever limits of discharges are set by this conference for compliance at a later date.

May I?

MR. WHITE: Yes, without objection that will be entered into the record, Mr. deCastro. And I might well say

J. F. deCastro

that either this or a facsimile will be entered, because it might be difficult to reproduce.

(The documents referred to by Mr. deCastro follow:)



STATE OF FLORIDA
DEPARTMENT OF
AIR & WATER POLLUTION CONTROL

SUITE 300, TALLAHASSEE BANK BUILDING
315 SOUTH CALHOUN STREET, TALLAHASSEE, FLORIDA 32301
TELEPHONE (904) 224-9226

VINCENT D. PATTON
EXECUTIVE DIRECTOR

December 9, 1970

NATHANIEL P. REED
CHAIRMAN

Escambia County, IW
St. Regis Paper Company
Cantonment

Mr. R.T. Hudson
Resident Manager
St. Regis Paper Company
P.O. Box 1591
Pensacola, Florida 32502

Dear Mr. Hudson:

This will acknowledge receipt of construction permit applications and other applicable documents for an expanded industrial waste water treatment system to serve the St. Regis Paper Company Kraft Mill at Cantonment, Escambia County, Florida.

These documents have been reviewed and the attached construction permit No. IC 851 dated December 8, 1970 has been issued subject to the attached standard provisos 1 through 6 and the following:

7. St. Regis Paper Company's current program of sampling, analysis, and submissions of monthly operation reports entitled Settling Basins, Lakes and Riffles and Survey of Eleven-Mile Creek and Perdido Bay shall be continued. Daily flows of waste water discharged shall also be reported upon. An operation permit will not be issued until a sufficient number of operation reports have been received to substantiate compliance with the Rules of the Florida Air and Water Pollution Control Board, as well as pollutant level limitations to be established after the forthcoming continuance of the Federal Meeting scheduled for January 1971.
8. A color reduction process shall be implemented when research has been completed and feasible techniques developed. Hopefully, this may be accomplished by January 1, 1973.

CHARLES M. DAVIS
BOARD MEMBER

JOHN P. ROBERTS
BOARD MEMBER

JAY E. SCHENCK
BOARD MEMBER

A. D. VINCENT
BOARD MEMBER

Mr. R.T. Hudson

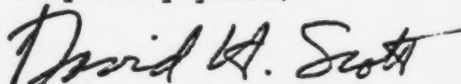
-2-

December 9, 1970

9. A foam constituent removal process shall be implemented when such a process has been identified and feasible techniques developed. Hopefully this may be accomplished by January 1, 1973.
10. An appropriate waste stream management study on water reuse shall be implemented in working toward an essentially closed system. A progress report is expected by January 1, 1971.
11. The Florida Department of Air and Water Pollution Control shall be notified of any changes or revisions made during construction of this expansion.
12. Any time this expanded system is found to be performing inadequately because of overloading, neglect, or other reasons, the owner shall provide additional measures to correct the cause of inadequate performance.
13. Aeration basin capacity and/or oxygenation shall be adequately increased if necessary for complying with the Rules of the Florida Air and Water Pollution Control Board or final pollutant limitations yet to be established.

Your cooperation in this matter will be appreciated.

Very truly yours,



David H. Scott, Chief
Bureau of Permitting

DHS:wdt

cc: Mr. Phil Doherty
cc: Escambia County Health Department
cc: Board of County Commissioners
cc: Mr. E.T. Tomlin, P.E.
St. Regis Paper Company
Gulf Life Tower
Jacksonville, Florida 32207
cc: Mr. De Castro

STATE OF FLORIDA
DEPARTMENT OF AIR AND WATER
POLLUTION CONTROL

CONSTRUCTION PERMIT

FOR St. Regis Paper Company
P.O. Box 1591
Pensacola, Florida 32502

PERMIT NO. IC 851

DATE December 8, 1970

PURSUANT TO THE PROVISION OF SECTION 403.061 (16) OF CHAPTER 403, FLORIDA STATUTES AND CHAPTER 17-4 FLORIDA ADMINISTRATIVE CODE, THIS PERMIT IS ISSUED TO:
R.T. Hudson, Resident Manager

FOR THE CONSTRUCTION OF THE FOLLOWING:

Expansion of Industrial Waste Treatment System (Aeration
Basin Retention Pond System)

LOCATED AT: Cantonment, Florida

16-0469-3388

IN ACCORDANCE WITH THE APPLICATION DATED November 23, 1970
AND IN CONFORMITY WITH THE STATEMENTS AND SUPPORTING DATA ENTERED THEREIN,
ALL OF WHICH ARE FILED WITH THE DEPARTMENT AND ARE CONSIDERED A PART OF THIS
PERMIT.

THIS PERMIT SHALL BE EFFECTIVE FROM THE DATE OF ITS ISSUANCE UNTIL July 1, 1972
AND SHALL BE SUBJECT TO ALL APPLICABLE LAWS OF THE STATE AND THE RULES AND REGULATIONS OF THE DEPARTMENT.

David H. Scott
DAVID H. SCOTT, CHIEF
BUREAU OF PERMITTING

Vincent D. Patton
VINCENT D. PATTON
EXECUTIVE DIRECTOR

DEPARTMENT OF AIR AND WATER POLLUTION CONTROL

STANDARD PROVISOS

1. Construction of this installation shall be completed by January 1, 1972.
2. This installation shall be operated by a competent and qualified person. Operations shall be conducted according to the best accepted practices and the recommendations of the Department of Air and Water Pollution Control.
3. This construction permit is issued with the understanding that the owner may need to comply with county, municipal, or other local regulations prior to construction.
4. The applicant shall continue the retention of the engineer of record for the inspection of the construction of this project. Upon completion the engineer shall inspect for conformity to construction permit applications and associated documents. A report of such inspection shall be submitted by the engineer to the Department of Air and Water Pollution Control for consideration toward the issuance of an operation permit. Notification of the pending completion of this project shall be transmitted in writing to the Department by the engineer approximately two weeks before the completion of construction.
5. This construction permit expires on 7-1-72 following an initial period of operation for appropriate testing to determine compliance with the Rules of the Florida Air and Water Pollution Control Board.
6. Detailed plans and specifications for this report shall be available upon request by the Department of Air and Water Pollution Control.

J. F. deCastro

MR. DE CASTRO: Here again all that we have said so far about St. Regis and the other cases as far as compliance with the milestones of the enforced abatement program would be meaningless without results. We are professionals in the art of abating pollution and abhor the idea of justifying enforcement with other than physical abatement. We are after results, not wordy subterfuges or alibis.

This chart correlates years elapsed with BOD discharges from St. Regis expressed in population equivalent factors, BOD basis. At this point we wish to emphasize that some values of the data reflected on the chart require further verification by our regional laboratories.

The top part reflects raw conditions before 1967, before the time of the citation that we are enforcing as of now.

The middle point shows conditions as reported by the Federals in 1970.

The third, the 1971, are the conditions as of now which remain more or less the same as they were in 1970. This reflects a 50-percent-plus treatment of the BOD loading of St. Regis which was reached some months ago. Of course, the final point reflects the target asset by the conferees in January 1970, which more or less was our 10 percent reduction.

The Bureau of Enforcement assures this audience that

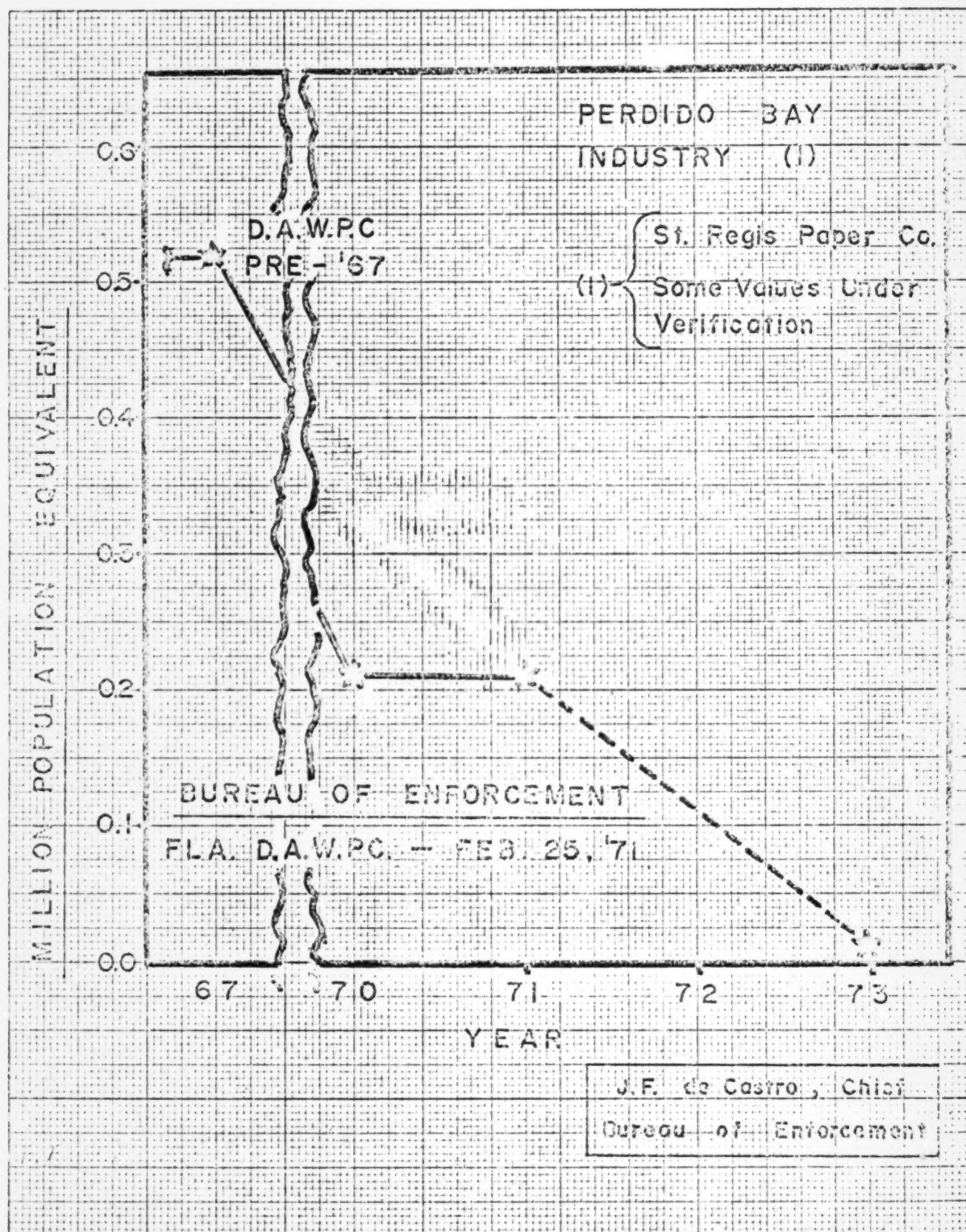
J. F. deCastro

the enforced target, as shown on the chart, will be met and met ahead of time. To be more specific, by October of this year.

That completes my statement.

MR. WHITE: Thank you, Mr. deCastro. I would like to observe that a copy of the chart will be entered into the record for clarity.

(The chart referred to follows:)



J. F. deCastro

MR. WHITE: Also I would like to say that we certainly appreciate your comments, and I think for purposes of some clarification we should go into this just a little further.

The accomplishments that you refer to are good accomplishments, but they relate primarily to 5-day BOD reduction.

MR. DE CASTRO: Right.

MR. WHITE: And this, of course, is one of our goals. I think one of the primary concerns of many of the people here are the foam causing constituents and these results that interfere with many uses in the bay, and I think that much of the conversation earlier today or most of it was centered against this type discharge, and it was not meant to detract from your presentation.

Are there any other comments?

MR. DE CASTRO: May I make a statement?

MR. WHITE: Yes.

MR. DE CASTRO: Although not a part of this conference, it came up awhile ago when somebody talked about air pollution. I would like to say something very briefly, just 15 seconds.

MR. WHITE: Please.

MR. DE CASTRO: St. Regis is under not exactly a citation but under local notice on air pollution matters and

J. F. deCastro

they are due with a report and an engineer's report by April or in April of this year. They assure me so far that they will have the latest technology on air pollution abatement. We haven't seen the program, but we will go over it and issue an adequate document to cover that phase of the pollution of St. Regis.

MR. WHITE: Thank you.

Are there other comments or questions?

MR. TRAINA: No.

MR. REED: Thank you, Mr. deCastro.

I call on Mrs. Eugene Kee from Perdido Bay, Pensacola.
Mrs. Kee.

MRS. EUGENE KEE

HOUSEWIFE

PENSACOLA, FLORIDA

MRS. KEE: Mr. Chairman. I am Mrs. Eugene Kee. I have been living on Perdido Bay for 29 years, and I have seen this condition worsen through the years. We are all concerned, but I wonder why we are concerned just four years ago. Why is it that it just happened four years ago that you got the citation?

MR. REED: Speaking for the Department of Air & Water Pollution, we weren't even in existence four years ago. We came into existence as a Commission three years ago without any staff

Mrs. E. Kee

and no money, and then two years ago we became a department with enough money in the first year to hire about 40 people and the second year, which is this year we are operating in now, we are up to about 160 positions for the entire State of Florida. I would like to have 160 of them right here in this county.

This is a problem, as I pointed out. This money does not come from the Governor, it comes from the Legislature of the State of Florida, as it would come in any other State in the Union. Progress in environmental quality organizations has been very slow nationwide.

MRS. KEE: I see. Well, as Mr. Walker said, my father-in-law ran the mall many years before he did. We are natives and we would like to see the condition cleared up. In two years' time if it can have any semblance of what it was when we moved there that many years ago, I will be pleased.

MR. REED: I can't guarantee you are going to have the bay back the way your father knew it.

MRS. KEE: No.

MR. REED: But I certainly hope you are going to have the bay back in a highly usable form for all water contact sports.

MRS. KEE: Thank you. I know it myself, I will not enter the water, nor catch mullet from it.

C. A. Lowery

MR. WHITE: Thank you, Mrs. Kee.

MR. REED: Mr. Charles Lowery, President of the Bream Fishermen Association of Pensacola.

Mr. Lowery.

CHARLES A. LOWERY, PRESIDENT

BREAM FISHERMEN ASSOCIATION

PENSACOLA, FLORIDA

MR. LOWERY: Mr. Chairman, members of the committee.

I am Charles Lowery, President of the Bream Fishermen Association. I would like to say at this time we do welcome the interest that is shown by the members of the Alabama community in our area, we do welcome the support of your Attorney General in his fight to correct the problem on Perdido River and Bay. We also hope and have assurances that our Attorney General will pursue this same problem along the area of Escambia River and its influents by the Container Corporation of America which is located in Brewton. With the common objective in mind of the two communities, I feel as a citizen's group and organization that we can combat this problem that we have at hand. All is not lost. That is evidenced by the gathering of this group today.

As I stated earlier, two years ago most of us thought being polluted was when we left across the State line that is common to a lot of us from the Alabama-Florida area here, being

C. A. Lowery

upon alcohol and not effluent from industry. But today we are fully aware of this and understand that problems must be corrected.

As a matter of introduction, the Bream Fishermen's Association is a small local organization of fishermen conservationists who are much concerned with the conservation and preservation of northwest Florida's many outdoor resources. Since our group is **freshwater** oriented, we are particularly concerned about two primary river systems bordering our county, that being Perdido River and Escambia River.

We recognize that this hearing as well as the Escambia hearing must necessarily be directed toward the correction of the bay problems first. However, the BFA feels that possibly not enough attention is being given to the fact that the rivers themselves are polluted as well as their relative bays. Specifically, the upper Escambia River and certain headquarters of the Perdido River are now in trouble. We believe that this group should consider initiating a joint investigation of these two areas with the objective of considering that though your recommendations and standards may be adequate for the bays, they may not offer enough protection to the rivers and their various tributaries.

We would also like to offer the observation that pollution control should involve three distinct responsibilities.

C. A. Lowery

First, an environmental quality agency should be responsible for stopping or minimizing present pollution practices. As we visualize the situation, this is the action that is being taken today by the Federal and State agencies that are sponsoring this hearing.

Secondly, it should be the responsibility of such agencies to develop methods of correcting or restoring the water quality of bays and rivers once the pollution has been stopped.

In this respect, action will be required to restore the bottom quality of Eleven Mile Creek, parts of Perdido Bay and almost the entire upper Escambia Bay. We would appreciate the comments of this panel as to what action is being considered along the restoration line.

MR. REED: Would you like to have it now? We have done a great deal of work on this.

MR. LOWERY: All right, sir.

MR. WHITE: Mr. Reed.

MR. REED: One thing that we know at this time that the best minds in the world on Escambia Bay put together is that the best thing that can be done is to cut the effluent off at the highest degree possible, and at the moment we know of no better thing than to leave the bay alone. Any dredging will return millions of pounds of nutrients into the water, which

C. A. Lowery

would be a grievous error. We had this under active consideration at one time.

A very fine study group has come together and put their very, very best minds to work on this problem and we expect to hear more from them in the future. But this bottom will consolidate if the effluent leaves the bay and we hopefully will begin to regain grasses. As we get grass coverage again and get the color straightened out, the photosynthesis should be of enormous assistance in the growth of a marine bottom.

But this is not being disregarded. As a matter of fact, if I could tell you how many hundreds of hours were spent on this this last year, we don't have an absolute answer for you, but we do know some no-nos.

MR. LOWERY: Yes. Thank you, sir.

MR. WHITE: Mr. Traina, would you care to comment?

MR. TRAINA: Yes, just to answer Mr. Reed, we have spent a lot of time; we have been in close touch with some international people, Dr. Gene Odum and his staff, of Macon, Georgia. And as Mr. Reed says, the best bet at this point is do nothing with the bay bottom, let it take care of itself.

MR. WHITE: I would like to cloud the issue slightly and say that there are many schools of thought on this, but these gentlemen have stated a conclusion which seems to be

C. A. Lowery

emerging as an acceptable one.

MR. REED: If we come up with anything more brilliant, Mr. White, we will let you know.

MR. WHITE: Thank you, Mr. Reed. (Laughter.)

MR. LOWERY: Gentlemen, we feel that a third responsibility of the pollution control agencies should be to develop standards which will insure that area waters will not be polluted by future developments along or near its borders. This has been pointed out already. We can give you a specific problem here in Escambia County that we think needs immediate anti-pollution action and recommendations by Federal and State agencies such as you that are represented here on this panel.

This problem spills over into, of course, the Escambia River area as well as Perdido River area. As you know, up in that particular area we have struck black gold, and along those lines we would like to say that we think that the specific problem is the recent discovery of oil along the Florida and Alabama border of Escambia and Santa Rosa Counties. No matter what anyone says, an accidental spillage can occur in routine oil drilling and processing operations. We think that some minimum distance should be prescribed between the sites of these operations and rivers such as the Perdido and Escambia. If a serious spill occurs, 40 to 50 miles of river could and would be destroyed.

In this respect, the BFA feels that Federal and State

C. A. Lowery

pollution control agencies should look to the future and make a recommendation similar to the following:

No oil well or related processing operation involving water pollution materials shall be located within one mile of any river, its flood plain or any of its tributaries or branch heads.

The one-mile limit, a mere 5,280 feet, is reasonable. This limit would provide sufficient space and, equally important, sufficient time to construct emergency dikes or levees to prevent a spill into the river caused by an industrial accident or a natural event such as our routine spring floods in this area. This distance would also suffice to minimize leaching and filtering of pollutants through our many underground springs and rivers, as has been mentioned in the Escambia River hearing, through our "phantom" springs.

It would seem that if our rivers and bays are to be maintained for future generations to enjoy, then pollution control such as the above should be placed into action. Any comment that the panel might have along these lines would be appreciated.

Before we get into that, gentlemen, whether or not you have a comment there or not, I would like to bring to your attention, I noticed earlier, not pertaining to the BFA at this

C. A. Lowery

point, along with the advisory committee on pollution in Escambia County, of which I am also a member, we have various data, especially in your case, Mr. Reed, that we could supply to you along with the recommendations that we have made plus some of the other pertinent data involved in the sanitary landfill, photographs, and what-have-you. We would be glad to supply this to the panel at your request.

MR. REED: Although sanitary landfills do not come under our direct purview, I guarantee you this sanitary landfill is going to come under our purview.

MR. LOWERY: Yes, and this will fit right into your problem, because even though I don't think that the damaging effect at this time by the sanitary landfill owned by Escambia County is going to make any material difference on Eleven Mile Creek at the present, at the same time if we are going to ask St. Regis to clean it up, which I believe they are, then we want to get our own door cleaned.

MR. REED: Good, sir.

MR. LOWERY: In the process.

MR. REED: Let me just comment for a moment. I think you make an excellent representation on the oil problem, such a good representation that I urge you to do the five-hour drive to Tallahassee on any Tuesday, writing ahead of time to the Director or the trustees of the II fund for a time to address

C. A. Lowery

the Governor and the cabinet of your great concern concerning the oil drilling on the Escambia River. I would urge you to take the time, make the drive, stand before the Governor and the cabinet and let them know how you and your fellow citizens feel about these projects that are contemplated right in the flood plain. That is who leases these bottoms and I would urge you to make the trip.

MR. LOWERY: We will definitely do that, because I think that in your own particular case you know what the situation is going to be on Escambia.

MR. WHITE: Are there any other comments?

Well, I will only reiterate that we will look into this matter. We really are not that much abreast of this particular problem that you describe, and I am sure that our authority doesn't extend to impose the type regulations that you suggest, but we will certainly check into it and see if we can get these recommendations.

MR. LOWERY: Yes, sir. I would only bring one point to you because it is a unique situation that does exist with the Escambia River, that is again with the agency here, with Dr. Myers and what-have-you, we have an interstate problem there because now they have all the oil pumping right now in the Pollard field, but we are going to start doing our share of the problems of the watershed there right away in the Jay

C. A. Lowery

area. I think that they have done a reasonable job in the Pollard field, but, man, if we go wild in Jay, you can hang it up, you won't have to worry about Escambia Bay any more because you can slide across it. (Laughter.)

MR. REED: The problem is, as you know, they have just hit significant new finds there.

MR. LOWERY: Yes, sir.

MR. REED: And they are capped for the moment, but the word is out that they have had significant finds, so I am sure the increase in well drilling will be apparent--

MR. WHITE: Thank you very much, Mr. Lowery.

MR. LOWERY: Thank you very much.

MR. REED: I would like to recognize the Assistant Attorney General of the State of Florida, Mr. Bjarne B. Andersen.

Would you like to say a few words, Mr. Andersen?

BJARNE B. ANDERSEN, JR.

ASSISTANT ATTORNEY GENERAL

STATE OF FLORIDA, TALLAHASSEE, FLORIDA

MR. ANDERSEN: Mr. Reed, we feel at this time that there is nothing significant. We are taking what you are saying up here and we are standing ready in your new integrated enforcement section.

MR. REED: We will be giving you some new enforcement

H. W. Thompson

orders today.

I would like to recognize the presence in the room of our great friend, Lt. Zangus.

I would like to recognize our capable engineer of the Northwest Region, Mr. Phil Daugherty.

Joe Blanchard from the Game and Fresh Water Fish Commission.

Here earlier was the Chief of the Federal Government's EPA Division in Atlanta, Mr. John Thoman, whom we always welcome to the State of Florida.

And we would like to also recognize the distinguished Mr. Tom Gallagher, who flew all the way from Denver, Colorado, to be here this day.

Unless somebody else wishes to speak, that concludes the Florida presentation.

I did miss Mr. H. W. Thompson. I didn't see him. Mr. Thompson, if you are here, I didn't mean to go over you by any manner of means, sir. Board Member of the Anti-Pollution League, Pensacola.

H. W. THOMPSON, BOARD MEMBER

PERDIDO BAY ANTI-POLLUTION LEAGUE

PENSACOLA, FLORIDA

MR. THOMPSON: Gentlemen, ladies and gentlemen.

One of the things that looked like was overlooked this

H. W. Thompson

morning, you have been talking about the foam, but there was mention made in the Environmental Protection Agency's report of 1971 about the solids that were going down Eleven Mile Creek in the Perdido Bay and part of my thunder was stolen by the gentleman before me by your remarks back that you don't disturb this thing.

But there are 32 years of stacking this up out there, and if there is some way to vacuum it up like you do in a swimming pool and put it onboard a vessel and--

MR. REED: My remarks were principally associated with Escambia Bay on the high phosphorus and nitrogen content of the bay bottom. Those remarks were not pertinent to Perdido Bay where perhaps other recommendations will be valid, which will be forthcoming.

MR. THOMPSON: I would hope that we would investigate this portion rather than have to come back several years hence and find that a lot of the foam and other things are still attributable to what is on the bottom, because it is excessive on the bottom. It is stacked up real deep. It is all the way down to where my farm is five miles below the bridge, and it must be awfully shallow in the estuaries of Eleven Mile Creek.

I would think that if somebody is convicted of littering, that they have to go pick it up--

MR. REED: Will you be here tomorrow morning?

H. W. Thompson

MR. THOMPSON: I can be.

MR. REED: I would like you to discuss the point with Mr. Andersen tomorrow morning.

MR. THOMPSON: Very well. Thank you very much.

MR. WHITE: Thank you, Mr. Thompson.

MR. REED: Unless anybody else in the room wishes to speak, Mr. White, I return the podium to you.

MR. WHITE: Thank you, Mr. Reed.

Dr. Myers has asked that we call back one of his technical representatives to add to the presentation.

Dr. Myers.

DR. MYERS: Mr. Joe Crockett, Director of our Technical Staff, I will ask him to come back and to review briefly, if you will, Joe, some of the progress on those treatment facilities. We have made some speculations, some of these facilities have been under treatment, some have been completed, and would you review what has been done on the Alabama side in terms of treatment of municipal sewage because that is one thing that is of vital importance on both sides of Perdido Bay.

J. L. Crockett, Jr.

JOSEPH L. CROCKETT, JR.

DIRECTOR OF THE TECHNICAL STAFF

ALABAMA WATER IMPROVEMENT COMMISSION

MOBILE, ALABAMA

MR. CROCKETT: Slightly over a year ago at the first session of the conference in a statement presented to you on behalf of the Commission a table of the source and status of municipal-industrial wastes was included in our statement. At that time there were four municipalities, it was in Alabama, discharging to tributaries of the Perdido River. One, Atmore, had secondary; Bay Minette had primary; the final plans are now being developed for secondary treatment at Bay Minette. Incidentally, Atmore discharges to Brushy Creek 51 miles from Perdido Bay; Bay Minette discharges to Hollinger Creek 43 miles from Perdido Bay. The third is Foley, with a secondary treatment system discharging to Wolf Creek approximately 13 miles from Perdido Bay. The fourth is Robertsedale, with a secondary treatment system discharging to Rock Creek 24 miles from Perdido Bay.

There are two Alabama industries within the Perdido Bay Basin, both located at Bay Minette, Alabama. One of these, Baldwin Pole and Piling Company, involved in the treating of poles and other wood products, discharges to Hog Creek 49 miles from Perdido Bay and we have listed that system as being

J. L. Crockett, Jr.

adequate.

Tenneco Chemicals Company, located in Bay Minette, discharges to Hollinger Creek 43 miles from Perdido Bay. I have been informed by my associates that the treatment system proposed for Tenneco Chemicals is near completion and should be completed within the very near future. This is in accordance with plans which were discussed with you a year ago.

MR. TRAINA: Joe, do you have a time schedule on Bay Minette that you indicated you have designs for?

MR. CROCKETT: Bay Minette, as I understand it, they have filed an application for Federal grant. I am not sure about the final plans being in our office. I should expect that with the grant going through as expected that the system at Bay Minette will certainly be completed by mid-1972. I put a little length of time on the completion of the Bay Minette system because of the fact that there is currently proposed to be introduced in our regular session of our Legislature, which convenes early in May, legislation which would materially assist these communities in financing sewage treatment. It is most difficult for me to press a city into an expenditure of funds at this moment when if they wait until after July 1 and the Legislature does appropriate funds to assist them with HUD State grants, then they will be eligible for the Federal grant even though our Legislature may not act until August or

J. L. Crockett, Jr.

September of this year, but if they go into it now they will lose the benefits that would accrue from State grant participation.

DR. MYERS: That is a secondary plant?

MR. CROCKETT: It is a secondary plant at Bay Minette.

MR. WHITE: Are there any other questions or comments?

If not, as I indicated previously, the conferees will adjourn today, go into executive session to consider all material that was presented here today, formulate revised conclusions and recommendations. We will return tomorrow morning at 9 a.m. to make these public.

With that, we stand--excuse me. Mr. Reed wants to make a comment.

MR. REED: Again Dr. Myers, Mr. Beck, my grateful thanks for being here. With a sense of harmony and cooperation I think we can now go into executive session with a clear frame of mind, knowing exactly what must be done to get this body of water back in proper condition.

MR. WHITE: Dr. Myers, do you have any comment?

DR. MYERS: Yes, I want to express appreciation to all of the conferees for the cooperation shown in this particular hearing and being able to offer an opportunity for everyone to speak their piece. I will not be able to be here in the morning, I have to go back and work on another matter with the

J. C. White

legislative committee, but we will be represented here by Mr. Beck.

MR. WHITE: Thank you. I, too, would like to thank both you and Mr. Reed for your contribution. We regret that you can't be here tomorrow, but you will know the results and these will be released to the news media, I am sure they will be possibly published in the paper tomorrow.

I hope this is not too inconvenient for many of you here. We would like to see all of you back, if you can make it, in the morning.

We stand adjourned until 9 a.m. tomorrow morning.

(Whereupon, at 4:00 an adjournment was taken until 9:00 Friday, February 26, 1971.)

MORNING SESSIONFRIDAY, FEBRUARY 26, 1971

MR. WHITE: The conference is reopened.

The conferees met in executive session late yesterday afternoon, and I am happy to report that we unanimously agreed on revised conclusions and recommendations, which will be forwarded to Mr. Ruckelshaus for promulgation under the Federal Water Pollution Control Act as amended.

And before getting into this summary, I would like to pause just a minute to thank each of the conferees here, each of the participants in the conference, and each person in attendance. I feel that we have received additional evidence which necessitated a different approach from that previously set forth at the first session of the Perdido Bay enforcement conference.

With that, I will read the conclusions and recommendations:

The area considered by the conferees is the Perdido Bay and its tributaries in Florida and Alabama.

The conclusions of the January 1970 Enforcement Conference showed that the St. Regis Paper Company, located north of Pensacola in Cantonment, Florida, discharges partially treated paper and pulp wastes into Eleven Mile Creek at an average daily rate of approximately 29,000,000 gallons per day. This volume constitutes most of the dry weather flow in Eleven Mile Creek.

Conclusions and Recommendations

The 1970 conclusions further showed that the inadequately treated waste effluent from the St. Regis Paper Company at Cantonment, Florida, is the major cause of the low dissolved oxygen, unsightly foam, excessive sludge deposits, and increased lignin in Perdido Bay and River, as well as degraded water quality in Eleven Mile Creek. Water quality problems in the mouth of Bayou Marcus are caused by the collective discharges to the bayou from nine small treatment facilities, the most significant of which are the Mayfair, Montclair, and Avondale plants.

Problems of foaming and other evidence of water quality degradation in Perdido Bay have persisted since the January 1970 Enforcement Conference. There is considerable evidence that overall quality of bay waters has worsened.

Progress toward reducing waste discharges into Perdido Bay or its tributaries has not been satisfactory, especially as it relates to reduction of foam-causing constituents in effluent from the St. Regis paper mill.

Water quality in Eleven Mile Creek is completely degraded and does not meet the criteria established by the State of Florida for industrial use, the stream's official classification.

Sewage and industrial wastes discharged to Eleven Mile Creek and Bayou Marcus in the State of Florida cause

Conclusions and Recommendations

pollution of the interstate waters of Perdido River and Perdido Bay which endangers the health or welfare of persons living in the State of Alabama. These wastes are, therefore, subject to abatement under the provisions of Section 10 of the Federal Water Pollution Control Act (33 U.S.C. 466 et. seq.).

B. Recommendations.

Based on the evidence presented at the second session of the Perdido Bay Enforcement Conference, the following waste abatement and water quality management program is recommended to abate the existing pollution in Perdido River and Bay.

1. The St. Regis Paper Company at Cantonment, Florida, shall reduce, by June 1, 1971, the five-day BOD generated within the plant to a level not to exceed 51,000 pounds per day. Particular attention shall be paid to tall oil and other recovery processes.

If this reduction cannot be met by June 1, 1971, the company shall reduce plant production levels as necessary.

2. The St. Regis Paper Company shall, by June 1, 1971, materially remove the foam-causing constituents from its waste discharge such that unaesthetic foaming in Perdido Bay is eliminated. The company shall report to the conferees monthly beginning April 1, 1971, on the methods being utilized to accomplish this objective.

3. St. Regis Paper Company shall not discharge more

Conclusions and Recommendations

than 5,100 pounds per day of five-day BOD to Eleven Mile Creek at the completion of construction of waste abatement facilities scheduled for, and in no event later than, October 31, 1971.

If further investigation shows that this limit is excessive, St. Regis Paper Company will be required to further reduce its waste effluent discharge.

There shall be a maximum feasible reduction of carbonaceous organic materials. St. Regis Paper Company shall monitor its effluent to measure these reductions, conduct a feasibility study, and submit a plan of abatement for carbonaceous wastes to the conferees by February 15, 1972.

4. The St. Regis Paper Company shall reduce the color of its waste discharge to meet the water quality standards of Florida, Alabama, and the Federal Government. The St. Regis Paper Company shall report to the conferees by February 15, 1972, its findings on methods for removing color from its waste discharge.

5. St. Regis Paper Company shall submit a report to the conferees by February 15, 1972, on the application of the present water renovation research project to the Cantonment mill.

6. The progress toward consolidation of sewage treatment plants on Bayou Marcus has not been satisfactory. The Escambia-Santa Rosa Planning Council shall submit to the

Conclusions and Recommendations

State of Florida by April 15, 1971, a satisfactory plan for accomplishing the consolidation of the Bayou Marcus sewage treatment plants.

7. No further construction dredging shall be permitted in Perdido Bay until a master plan for development of the shoreline has been prepared and approved by the States of Florida and Alabama, respectively. Maintenance dredging of existing channels shall be by pipeline or by hopper dredge. Disposal of all dredged materials from hydraulic dredging shall be to upland spoil sites. The Corps of Engineers is requested to provide the conferees with a listing of these sites.

That concludes the conclusions and recommendations.

I would now like to call on the conferees to see if they have a statement to make.

Mr. Beck.

MR. BECK: Mr. White.

I have no statement other than to say to you on behalf of the citizens of Alabama, we thank you and the other two conferees, one from Florida and the Federal conferee, for their interest in the problems in the Perdido Bay, and I hope that we are on the way to solving most of them.

Thank you so much.

MR. WHITE: Thank you, Mr. Beck.

Mr. Patton.

Conclusions and Recommendations

MR. PATTON: I would like to express Mr. Reed's regrets that he was unable, because of his schedule, to be here this morning and to express his thanks to Dr. Myers and Mr. Beck and to you, Mr. White and Mr. Traina, for your assistance in this matter.

MR. WHITE: Thank you, Mr. Patton.

Mr. Traina?

With that, we stand adjourned.

(ADJOURNMENT)

March 8, 1971

Mr. John White, Director
Environmental Protection Agency
Suite 300, 142 Peachtree Street; N. E.
Atlanta, Georgia

Dear Mr. White:

As per your directive I request that this be made a part of the official record and final statement of the reconvened Environmental Protection Agency meeting held at Pensacola, Florida on February 25, 1971.

As a member of the Executive Committee of the Perdido River Basin Anti-Pollution Association, I and we have made much ado about the foam situation on Perdido Bay. I, now, request that studies be made of the bottom lands of Perdido Bay adjacent to the mouth of Eleven Mile Creek. It has been my observation by air, boat and by walking along the beach on the western shores of Perdido Bay AS FAR SOUTH as five miles from the Perdido Bay Bridge that there appears to be enormous quantities of apparent paper mill sediment and, or sludge deposits resulting from some thirty-two years of effluent dumping by the St. Regis Paper Company's plant in Cantonment, Florida into the Perdido Bay Basin. These deposits when stirred up, tend to cling to boats, bouys, ropes, anchor lines, dock pilings, bathing suits and even human skin.

Some two years ago we were informed by Mr. Henry Fales, the plant manager of St. Regis Paper Company in Cantonment at that time, that: "THE SAMPLES OF FOAM TAKEN BY US FROM PERDIDO BAY AND ANALYZED IN OUR LABORATORY SHOWED NO TRACE OF PAPER MILL EFFLUENT." Enclosed you will find a copy of this negative report. This is the reason that this letter is by certified mail.

In January of 1970 at the first session of this conference Mr. Murray Stein, Federal Water Quality Administrator Chairman, contradicted Mr. Fales and his report by stating that the foam found in Perdido Bay Did Indeed contain paper mill waste and its effluent.

Page 2.

March 7, 1971

Thompson-White

Anti-Pollution - Perdido Bay

It is due to the adamant statement made by the St. Regis Paper Company in the past the "They were not primarily responsible for the pollution in Perdido Bay," that I am now requesting the irrefutable testimony or testing of our bay by reliable governmental agencies in checking these sludge deposits on the bottom lands of Perdido Bay.

I, also, add to this request that if, as I suspect, these deposits are primarily caused by the St. Regis Paper Company that they be required to remove these deposits if the deposits are, in fact, created by them. PLEASE NOTE: The foregoing request is predicated on the feasibility in not disturbing the ecology of the bay any further by the releasing of undesirable nutrients in the waters to the further detriment of sea life in the bay area. I, personally, do not believe that the effluents released by the St. Regis Paper Company are of the type that the removal of same by dredging would further damage the ecology of Perdido Bay, however, this I do not know and am now asking you to find the answer.

All of the afore mentioned requests and statements are of the utmost importance to the residents of the Perdido Bay Area, but the most important aspect of the cleansing of this body of water will be the re-opening of shell fish procurement. Oysters and shrimp in this bay have been denied us by your agency or the like....when you grow your own and we felt that we did... IT HURTS...but it also hurts the commercial fishermen...and YOU, TOO, in the final analysis for don't YOU TOO like to eat crabs, shrimp, mullet?

RESPECTIVELY, SUBMITTED:

Harry Wright Thompson Jr.

HARRY WRIGHT THOMPSON, JUNIOR
P. O. BOX: 1775
Pensacola, Florida

Encl.

CC: Mr. Robert L. Snevin
Attorney General of Florida

INTER-OFFICE CORRESPONDENCE

FROM J. R. Cramsie

LOCATION West Nyack, New York

DATE August 1, 1969

TO

H. W. Fales

cc: J. D. Chazin
T. P. Crane
R. J. Romagnoli
M. T. Still
J. E. WilberRE: Foam Samples from Perdido Bay

At your request, we have analyzed the samples of foam submitted on July 21. Before reporting the results, however, I believe it would be helpful to discuss the background of this type of analysis.

Sea water, as you know, contains animal life, debris and mineral salts. Unless quantities of protein, carbohydrate or chemical are found that are obviously in excess of a normal loading or unless a chemical is found that is not a normal component in sea water, it is difficult to assign significance to an analytical result.

Foam is itself a phenomenon on which there has been little practical background. The three theories which attempt to explain its generation and stabilization are not in accord. I attach, however, a copy of an abstract of a paper by W. D. Garrett from Deep Sea Research. This raises the question as to whether the foam has increased in Perdido Bay because of a reduction in the defoamer present. I know that ships are now much more careful to prevent oil spills than they used to be and this may have reduced the mono-molecular slick.

Furthermore, the samples sent to us as pure foam were liquid on arrival. Efforts to produce a stable foam from this liquid in the laboratory were unsuccessful.

The samples received were as follows:

1. "Dark Brown" foam from Upper Perdido Bay 6/16/69.
2. "Light Brown" foam from Lillian Bridge area 6/16/69.
3. Foam from Intercoastal Waterway, 1/2 mile east of Western tip of Innerarity Point in Old River.

All samples were liquid as received and contained suspended solids. The suspended solids were not great in #1 or #2 but in sample #3 there was much more. This was found to be 0.08% (or 800 ppm) by weight.

The suspended solids were separated, dried and analyzed by infrared spectroscopy.

J. R. Cramsie to
H. W. Fales
August 1, 1969
Page 2

Evidence of protein, carbohydrate and silica were found but no indication that would be associated with pulp and paper mill effluent.

Specific tests for detergent were also carried out on a concentrated sample. The method used was the Methylene Blue Method for Anionic Surfactants (Standard Methods, American Public Health Association Handbook 12th Edition, 1966, page 297). This is the method used to detect detergent contamination of drinking water. It measures alkyl benzene sulfonate (ABS) and linear alkyl sulfonate (LAS) and expresses the result as mg A.B.S./liter of water.

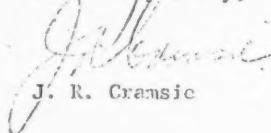
A parallel sample was checked by Benzene partition and gravimetry for rosin and wood fatty acids. The results were as follows:

<u>Sample</u>	<u>Mg ABS/liter</u>	<u>ppm Benzene Extractible</u>
#1 Upper Perdido Bay	0.062	None at 1 ppm
#2 Lillian Bridge	0.050	None at 1 ppm
#3 Intercoastal Waterway	0.048	None at 1 ppm

This concentration of detergent is very low and the rosin and fatty acids must be considered negligible.

It is known that surface active agents are concentrated in the foam layer and the concentration in the water under it would be expected to be lower than this. We cannot detect materials in these samples which can reasonably be attributed to paper mill effluent nor did we find any normal foaming agent.

Yours very truly,


J. R. Cramsie

JRC:lah
Attachment

are normally attaining maximal values in the summer. Deep waters of fjords with direct access to oceanic waters are sometimes exchanged annually in the summer, but waters of fjords with indirect access to the ocean are exchanged irregularly at intervals of several years. Variations in precipitation and periods of melting of snow fields and glaciers are discussed in relation to temporal changes in the salinity, temperature and turbidity found in the coastal and inlet waters.

1992. Aerial discovery manual. STRANDBERG, C. H. John Wiley & Sons, Inc., New York, London, and Sydney, 1967. 264 pp. 140s. This loose-leaf manual contains basic information, instructions, and advice on the interpretation of aerial photographs to obtain information on water resources and water pollution. Suggested applications of aerial survey methods are listed and a glossary of terms is appended.

1993. Pollution surveillance by non-contact infrared techniques. LORIE, J. R. V., RABBIT, G. S., and PRESSMAN, A. E. *J. Wat. Pollut. Control Fed.*, 1968, 40, 425-428. The authors discuss the principles and techniques involved in using discrete infrared mapping systems, operating in the 8-14 μ portion of the electromagnetic spectrum, and give examples of specific applications, including determination of thermal circulation and diffusion patterns produced by discharges of cooling water from power plants, detecting thermal pollution and measuring temperature decreases downstream from heated discharges, and establishing natural seasonal and diurnal ranges of water surface temperatures before construction of plants that will discharge liquid effluents. It is suggested that this method could also be adapted to determine the type, and possibly the concentration, of water pollutants, probably by identifying temperature-independent emissivity properties and relationships. Aerial recording of energy levels within selected narrow bands.

1994. Automatic instrumentation for hydrographic data collection. HART, D. G., REARD, A. F., and ROSS, J. J. *Wat. & Wat. Engng.*, 1968, 72, 51-57. An illustration is given of the design, construction and operation of a water quality monitoring station at Rewe on the river Cullm, and an automatic weather station at Ever airport, which are prototype systems developed by the Devra River Authority. A flow diagram is given of the former station, which samples river water every 30 min; the monitoring unit consists of a submersible intake from which water is conveyed to sampling probes for dissolved oxygen, temperature, conductivity, pH value, and suspended solids, data being recorded on magnetic tape on a digital time-lapse recorder.

1995. A new plastic-bag water sampler. ANDERSON, R. S. *J. Fish. Res. Bd. Can.*, 1967, 24, 2461-2465. The mechanism of a plastic-bag sampler is described and illustrated. A spring-loaded pulley is triggered by a messenger closing a circuit in which the bag is attached horizontally on to a metal sealing plate fixed with respect to the bag. By comparing the numbers of copepods sampled with a plankton net with those collected by the bag sampler, during vertical tows, values for net efficiency were determined which closely agreed with those found previously for the same type of net based on the numbers sampled with those found previously for the same type of net. The bag sampler was capable of good estimates of the population density of small, benthic zooplankton.

1996. Stabilization of air bubbles at the air-sea interface by surface-active material. GARNETT, W. D. *Deep Sea Res.*, 1967, 14, 661-672. Free gas bubbles in the sea may be produced by the decomposition of organic matter, the escape of microorganisms, and the breaking of waves. In the absence of a surface film, the lifetime of an air bubble is determined by the surface-active material adsorbed during its passage upwards through the sea water, but the presence of a compressed monolayer

molecular layer (see also) at the surface will significantly reduce bubble stability and act as an emulsifying agent, even though the underlying water is rich in bubble-stabilizing substances; this is attributed to resistance to flow caused by intermolecular cohesion forces within the monolayer at higher film pressures.

1997. Sea surface chemistry: organic carbon and organic and inorganic nitrogen and phosphorus in surface films and subsurface waters. WILLIAMS, P. M. *Deep Sea Res.*, 1967, 14, 791-800, 1 folding table. The concentrations of particulate and dissolved organic carbon, nitrogen and phosphorus and of dissolved nitrate, ammonia, and phosphate in surface films at stations off Peru and California were found to be much higher than those in the corresponding subsurface waters. The effect of the high concentrations of organic and inorganic nitrogen in the surface film on the nitrogen cycle in the ocean is discussed, and the ratios between organic carbon, nitrogen and phosphorus are considered in relation to the origin of particulate organic carbon.

1998. The occurrence and distribution of methane in the marine environment. ARKIN, I., and KIRCHGÖSS, F. A. *Deep Sea Res.*, 1967, 14, 673-684. Studies on the distribution of methane in the marine environment have shown that it occurs in the sulphide-bearing waters of the Black sea, the Cariaco trench off Venezuela, and the Nankai Trough off Japan, but not in the oxygen-deficient waters of the eastern tropical Pacific ocean, in the Santa Barbara basin, nor in the sulphide-bearing waters of British Columbia, B.C. The maximal concentration of methane observed was 70 μ mole per litre, and its distribution tended to follow that of sulphide. The data suggest that methane is derived from organic compounds not containing nitrogen or phosphorus and that its formation is slower than that of sulphide; the processes by which it may be formed are discussed.

1999. Inorganic nitrogen compounds in ocean stagnation and nutrient re-supply. GUPTA, R. S. *Science*, N.Y., 1968, 160, 884-885. From a study of changes in nitrate, nitrite, and ammonia in Gotland basin in the Baltic sea from the end of one period of stagnation to the development of the next, the author suggests that inorganic nitrogen compounds can be used as an indicator of the development and history of stagnation in such areas. During stagnation, large amounts of phosphate and ammonia accumulate in the deep waters of the basin; when this water is displaced upwards by new inflow the ammonia is gradually oxidized to nitrate and the increase in nutrients reaching the surface increases productivity, this enrichment spreading through the whole of the Baltic sea.

2000. Isotopic analysis of sea water by mass spectroscopy. CHOW, T. J. *J. Wat. Pollut. Control Fed.*, 1968, 40, 399-411. The author reviews the techniques of mass spectrometry and isotopic dilution for the determination of elements in sea water, and gives a table showing the scope of isotopic dilution analysis as used by various investigators (a bibliography of 67 references is appended). As an example of the usefulness of these techniques, details are given of studies on the occurrence of lead in sea water; these showed that the concentration of lead is increasing, owing to industrial pollution.

2001. The occurrence of abietic and pimaric acid type resin acids in the effluents of sulphite and sulphate pulp mills. MÄENPÄÄ, R., HYNINEN, P., and TIKKA, J. *Faprii Puh.*, 1968, 50, No. 42, 143-150; *Chem. Abstr.*, 1968, 68, 11797. Resin acids and esters in waste waters from sulphite and sulphate cellulose mills were determined by gas chromatography; detailed procedures are given. Abietic acid was the main resinic acid in waste waters from sulphite pulping of spruce, and abietic and dehydroabietic acids were the main constituents in kraft mill waste waters. Sulphite waste